


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐**APPLICATION FOR PERMIT TO DRILL**

<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>1. WELL NAME and NUMBER</b> NBU 920-14M1BS		
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 0577A		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b> Ute Tribe				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>				
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	468 FSL 637 FWL	SWSW	14	9.0 S	20.0 E	S
<b>Top of Uppermost Producing Zone</b>	1220 FSL 675 FWL	SWSW	14	9.0 S	20.0 E	S
<b>At Total Depth</b>	1220 FSL 675 FWL	SWSW	14	9.0 S	20.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 675		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 2091		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 380		<b>26. PROPOSED DEPTH</b> MD: 10788 TVD: 10670		
<b>27. ELEVATION - GROUND LEVEL</b> 4812		<b>28. BOND NUMBER</b> WYB000291		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		

**ATTACHMENTS****VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP
<b>NAME</b> Danielle Piernot	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b>	<b>PHONE</b> 720 929-6156
<b>API NUMBER ASSIGNED</b> 43047505250000	<b>DATE</b> 06/30/2009
<b>APPROVAL</b>	<b>EMAIL</b> danielle.piernot@anadarko.com
 Permit Manager	



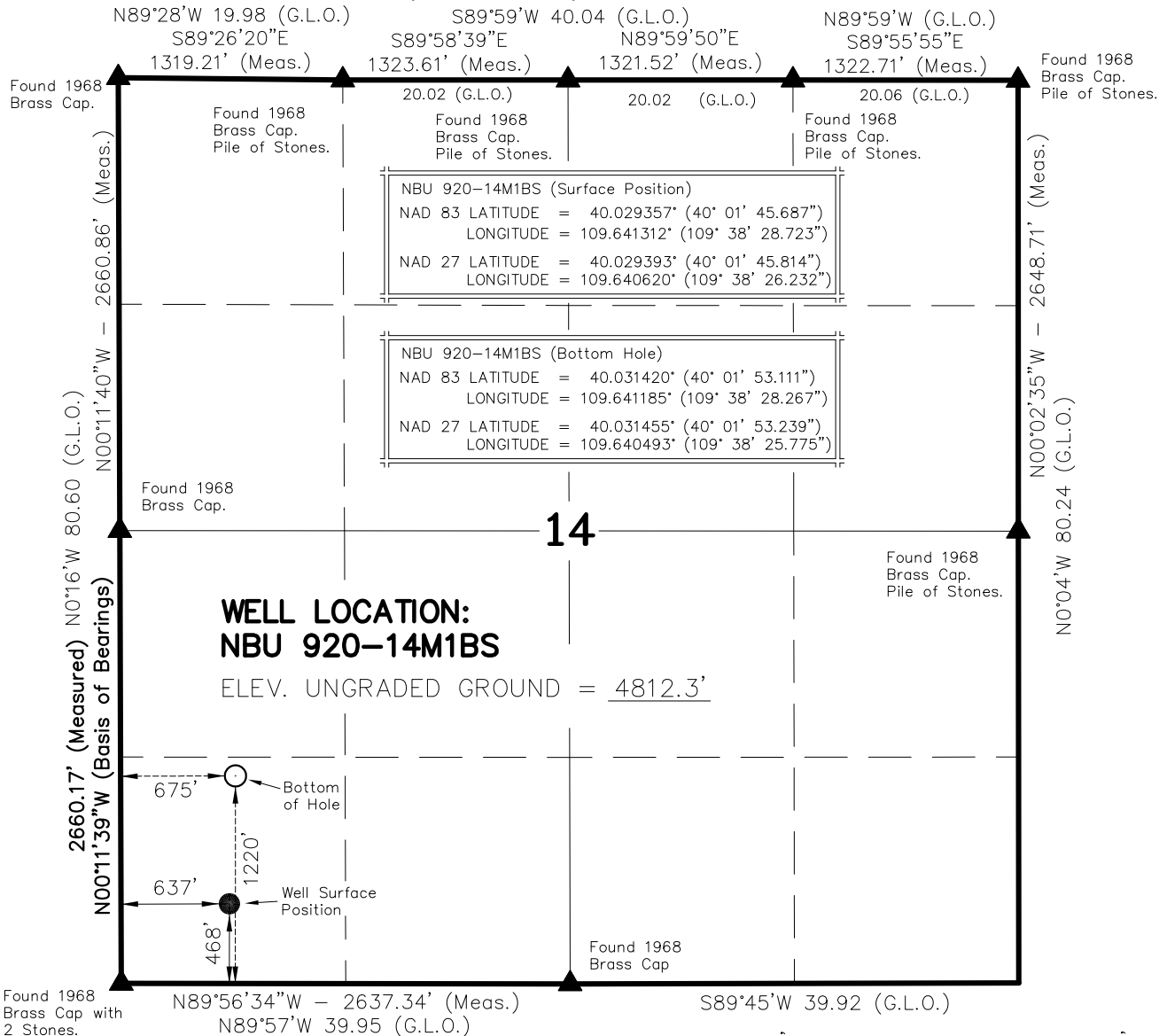
Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10788		
Pipe	Grade	Length	Weight			
	Grade P-110 LT&C	10788	11.6			



Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2710		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2710	36.0			



# T9S, R20E, S.L.B.&M.



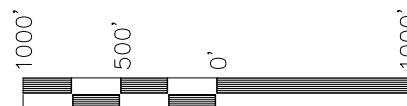
## NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
- 3. The Bottom of hole bears N02°43'07"E 752.35' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. Basis of elevation is the Northwest Corner of Section 12, T9S, R20E, S.L.B.&M. The elevation of this Section Corner is shown on the Ouray SE 7.5 Min. Quadrangle as being 4676'.

**Kerr-McGee**  
**Oil & Gas Onshore, LP**  
 1099 18th Street - Denver, Colorado 80202

**NBU 920-14M1BS**  
**WELL PLAT**  
 1220' FSL, 675' FWL (Bottom Hole)  
 SW  $\frac{1}{4}$  SW  $\frac{1}{4}$  OF SECTION 14, T9S, R20E,  
 S.L.B.&M. UTAH COUNTY, UTAH.

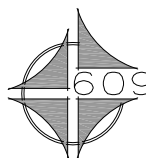
CONSULTING, LLC  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182



## SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 362251  
 STATE OF UTAH



**TIMBERLINE**

ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

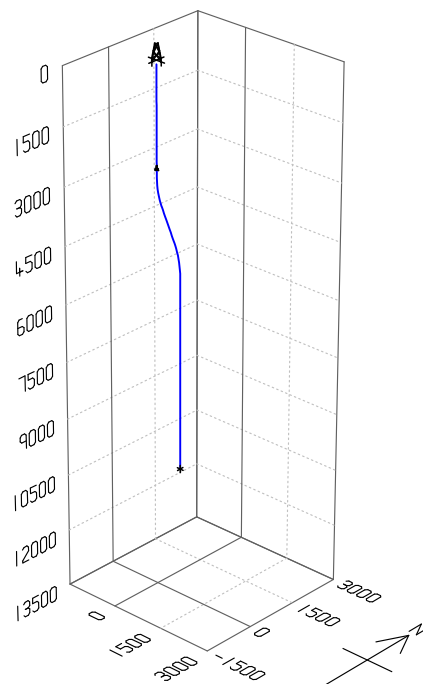
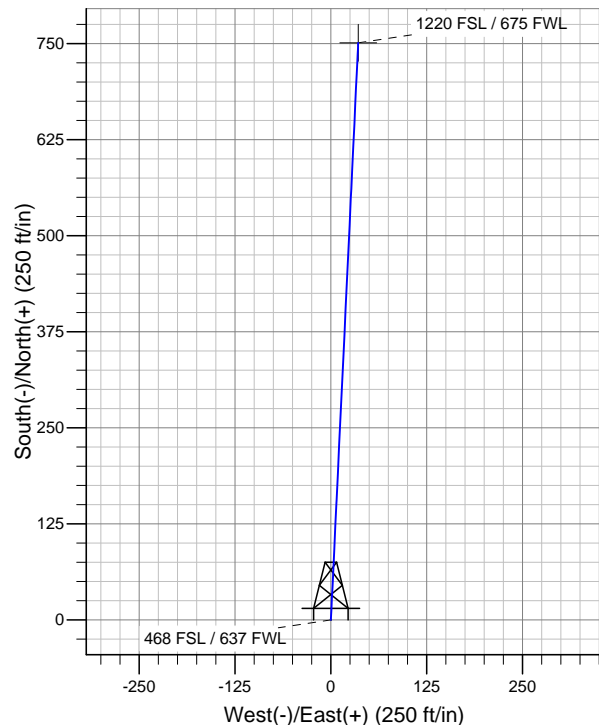
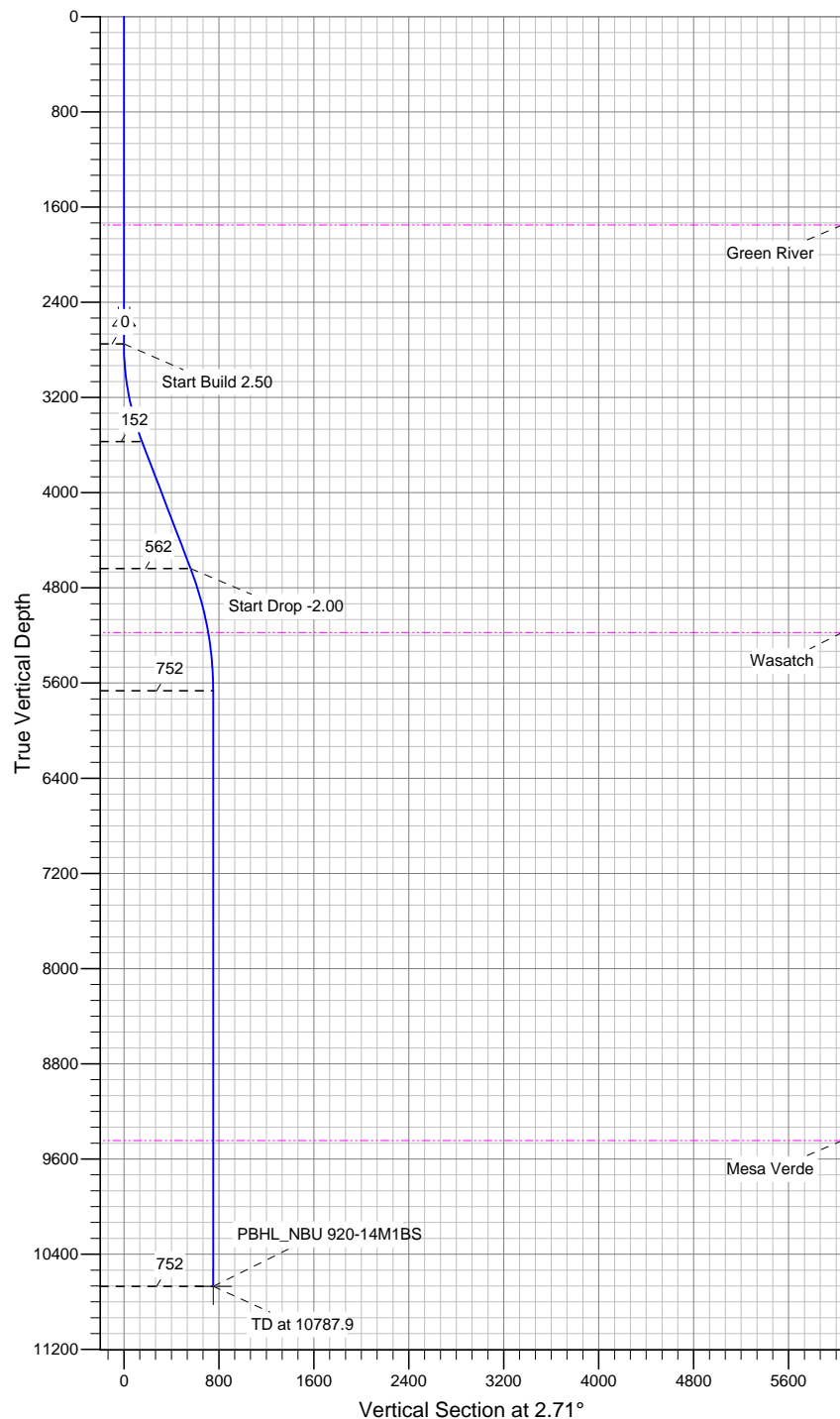
DATE SURVEYED: 01-21-09	SURVEYED BY: M.S.B.	SHEET <b>2</b> OF 12
DATE DRAWN: 02-11-09	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised: 03-18-09	



'APIWellNo:43047505250000'

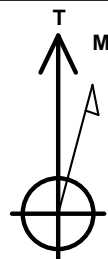


Well Name: P\_NBU 920-14M1BS  
Surface Location: UINTAH\_NBU 920-14M PAD  
NAD 1927 (NADCON CONUS) Universal Transverse Mercator (US Survey Feet)  
UTAH - UTM (feet), NAD27, Zone 12N  
Ground Elevation: 4812.0  
Northing 14539651.25 Easting 2020965.29 Latitude 40.029393°N Longitude 109.640620°W



#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	2750.0	0.00	0.00	2750.0	0.0	0.0	0.00	0.00	0.0
3	3590.0	21.00	2.71	3571.3	152.1	7.2	2.50	2.71	152.2
4	4732.2	21.00	2.71	4637.6	560.9	26.6	0.00	0.00	561.5
5	5782.2	0.00	0.00	5664.3	751.0	35.6	2.00	180.00	751.8
6	10787.9	0.00	0.00	10670.0	751.0	35.6	0.00	0.00	751.8



Azimuths to True North  
Magnetic North: 11.40°

Magnetic Field  
Strength: 52565.9snT  
Dip Angle: 65.93°  
Date: 4/27/2009  
Model: IGRF200510



# **ROCKIES - PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**UINTAH\_NBU 920-14M PAD**

**P\_NBU 920-14M1BS**

**P\_NBU 920-14M1BS**

**Plan: Plan #1 04-27-09 ZJRA6**

## **Standard Planning Report - Geographic**

**27 April, 2009**



# APC

## Planning Report - Geographic

<b>Database:</b>	apc_edmp	<b>Local Co-ordinate Reference:</b>	Well P_NBU 920-14M1BS
<b>Company:</b>	ROCKIES - PLANNING	<b>TVD Reference:</b>	WELL @ 4812.0ft (Original Well Elev)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	WELL @ 4812.0ft (Original Well Elev)
<b>Site:</b>	UINTAH_NBU 920-14M PAD	<b>North Reference:</b>	True
<b>Well:</b>	P_NBU 920-14M1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_NBU 920-14M1BS		
<b>Design:</b>	Plan #1 04-27-09 ZJRA6		

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site		UINTAH_NBU 920-14M PAD			
Site Position:		Northing:	14,539,670.86ft	Latitude:	40.029447°N
From:	Lat/Long	Easting:	2,020,961.35ft	Longitude:	109.640633°W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.87 °

Well	P_NBU 920-14M1BS					
Well Position	+N/-S	0.0 ft	Northing:	14,539,651.25 ft	Latitude:	40.029393°N
	+E/-W	0.0 ft	Easting:	2,020,965.29 ft	Longitude:	109.640620°W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,812.0 ft	

<b>Wellbore</b>	P_NBU 920-14M1BS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	4/27/2009	11.40	65.93	52,566

<b>Design</b>	Plan #1 04-27-09 ZJRA6				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	10,670.0	0.0	0.0	2.71	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,750.0	0.00	0.00	2,750.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,590.0	21.00	2.71	3,571.3	152.1	7.2	2.50	2.50	0.00	2.71	
4,732.2	21.00	2.71	4,637.6	560.9	26.6	0.00	0.00	0.00	0.00	
5,782.2	0.00	0.00	5,664.3	751.0	35.6	2.00	-2.00	0.00	180.00	
10,787.9	0.00	0.00	10,670.0	751.0	35.6	0.00	0.00	0.00	0.00	PBHL_NBU 920-14



# APC

## Planning Report - Geographic

**Database:** apc\_edmp  
**Company:** ROCKIES - PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** UINTAH\_NBU 920-14M PAD  
**Well:** P\_NBU 920-14M1BS  
**Wellbore:** P\_NBU 920-14M1BS  
**Design:** Plan #1 04-27-09 ZJRA6

**Local Co-ordinate Reference:** Well P\_NBU 920-14M1BS  
**TVD Reference:** WELL @ 4812.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4812.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	14,539,651.25	2,020,965.29	40.029393°N	109.640620°W
1,750.0	0.00	0.00	1,750.0	0.0	0.0	14,539,651.25	2,020,965.29	40.029393°N	109.640620°W
<b>Green River</b>									
2,600.0	0.00	0.00	2,600.0	0.0	0.0	14,539,651.25	2,020,965.29	40.029393°N	109.640620°W
<b>Surface Casing</b>									
2,750.0	0.00	0.00	2,750.0	0.0	0.0	14,539,651.25	2,020,965.29	40.029393°N	109.640620°W
3,590.0	21.00	2.71	3,571.3	152.1	7.2	14,539,803.40	2,020,970.17	40.029811°N	109.640594°W
4,732.2	21.00	2.71	4,637.6	560.9	26.6	14,540,212.50	2,020,983.29	40.030933°N	109.640525°W
5,291.5	9.81	2.71	5,176.0	709.1	33.6	14,540,360.79	2,020,988.04	40.031340°N	109.640500°W
<b>Wasatch</b>									
5,782.2	0.00	0.00	5,664.3	751.0	35.6	14,540,402.68	2,020,989.38	40.031455°N	109.640493°W
9,562.9	0.00	0.00	9,445.0	751.0	35.6	14,540,402.68	2,020,989.38	40.031455°N	109.640493°W
<b>Mesa Verde</b>									
10,787.9	0.00	0.00	10,670.0	751.0	35.6	14,540,402.68	2,020,989.38	40.031455°N	109.640493°W

### Targets

#### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL_NBU 920-14M - plan hits target center - Point	0.00	0.00	10,670.0	751.0	35.6	14,540,402.68	2,020,989.38	40.031455°N	109.640493°W

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,600.0	2,600.0	Surface Casing	9-5/8	12-1/4

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,750.0	1,750.0	Green River		0.00	
5,291.5	5,176.0	Wasatch		0.00	
9,562.9	9,445.0	Mesa Verde		0.00	



**NBU 920-14M1BS**

Pad: NBU 920-14M

Surface: 468' FSL, 637' FWL (SW/4SW/4)

BHL: 1,220' FSL 675' FWL (SW/4SW/4)

Sec. 14 T9S R20E

Uintah, Utah

Mineral Lease: UTU 0577A

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,750'	
Birds Nest	1,993'	Water
Mahogany	2,508'	Water
Wasatch	5,176'	Gas
Mesaverde	8,489'	Gas
MVU2	9,445'	Gas
MVL1	9,962'	Gas
TVD	10,670'	
TD	10,788'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*



7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,788' TD (MD), approximately equals 6,609 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 4,189 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

9. **Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

***Background***

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found*



*competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

#### ***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

#### ***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

#### ***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see*



*attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Conclusion***

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

**10. Other Information:**

*Please refer to the attached Drilling Program.*



COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	June 29, 2009		
WELL NAME	NBU 920-14M1BS	TD	10,670'	TVD	10,788' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
				FINISHED ELEVATION	4,811'
SURFACE LOCATION	SW/4 SW/4	468' FSL	637' FWL	Sec 14	T 9S R 20E
	Latitude:	40.029357	Longitude:	-109.641312	NAD 83
BTM HOLE LOCATION	SW/4 SW/4	1,220' FSL	675' FWL	Sec 14	T 9S R 20E
	Latitude:	40.031420	Longitude:	-109.641185	NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), Ute Tribe (Surface), UDOGM Tri-County Health Dept.				

NBU 920-14M1BS Drilling Program-updated 060409.xls





# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2,710	36.00	J-55	LTC	0.81	1.59	5.91
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 9,768	11.60	I-80	LTC	1.80	0.95	1.84
						10,690	8,650	279,000
	4-1/2"	9,768 to 10,788	11.60	HCP-110	LTC	47.64	1.30	28.88

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 4,189 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.0 ppg)

0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 6,609 psi**

### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
			+ 0.25 pps flocele				
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
Option 2	LEAD	2,210'	65/35 Poz + 6% Gel + 10 pps gilsonite	520	35%	12.60	1.81
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,668'	Premium Lite II + 3% KCl + 0.25 pps	440	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,120'	50/50 Poz/G + 10% salt + 2% gel	1,500	40%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

DATE:

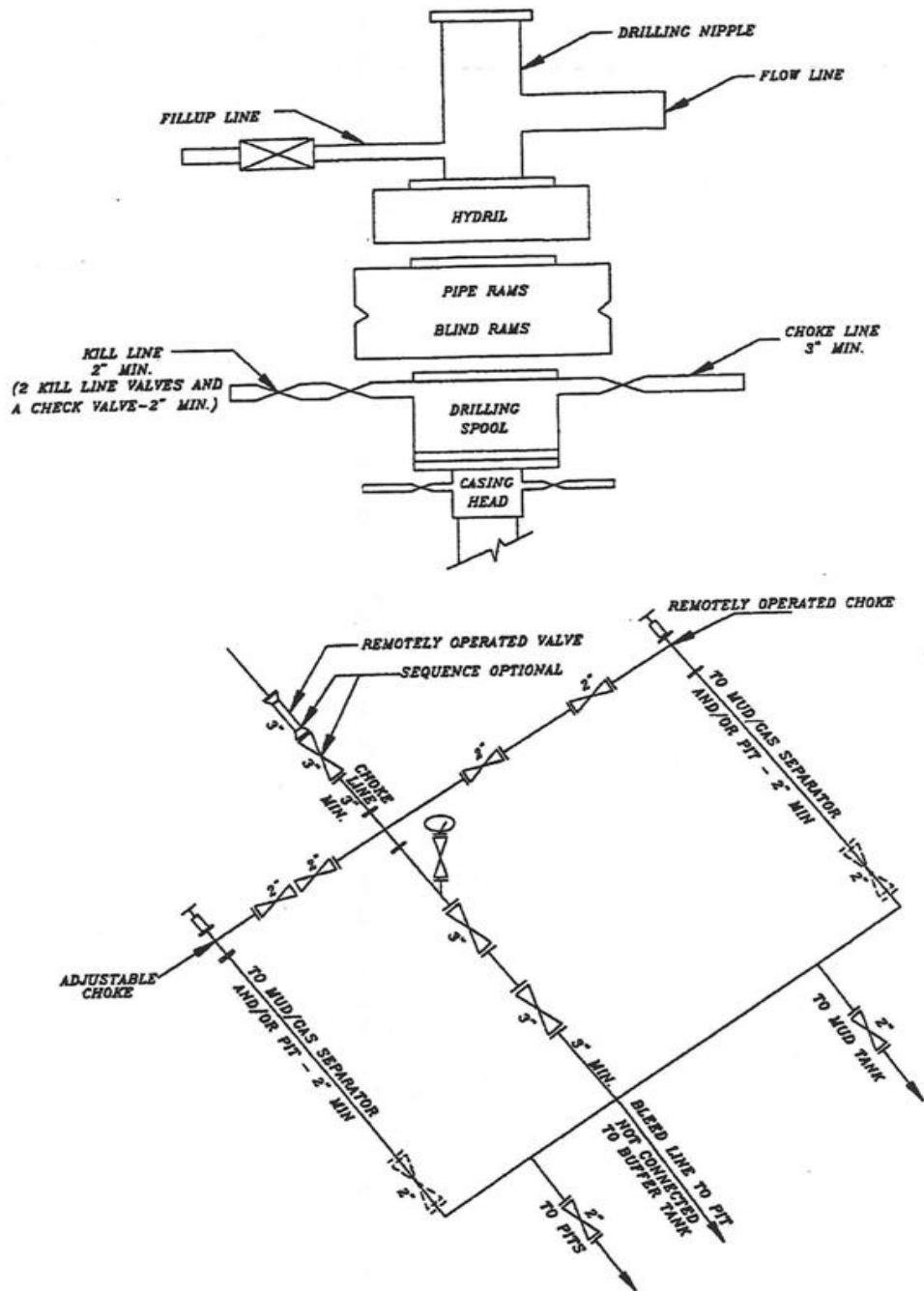
DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:

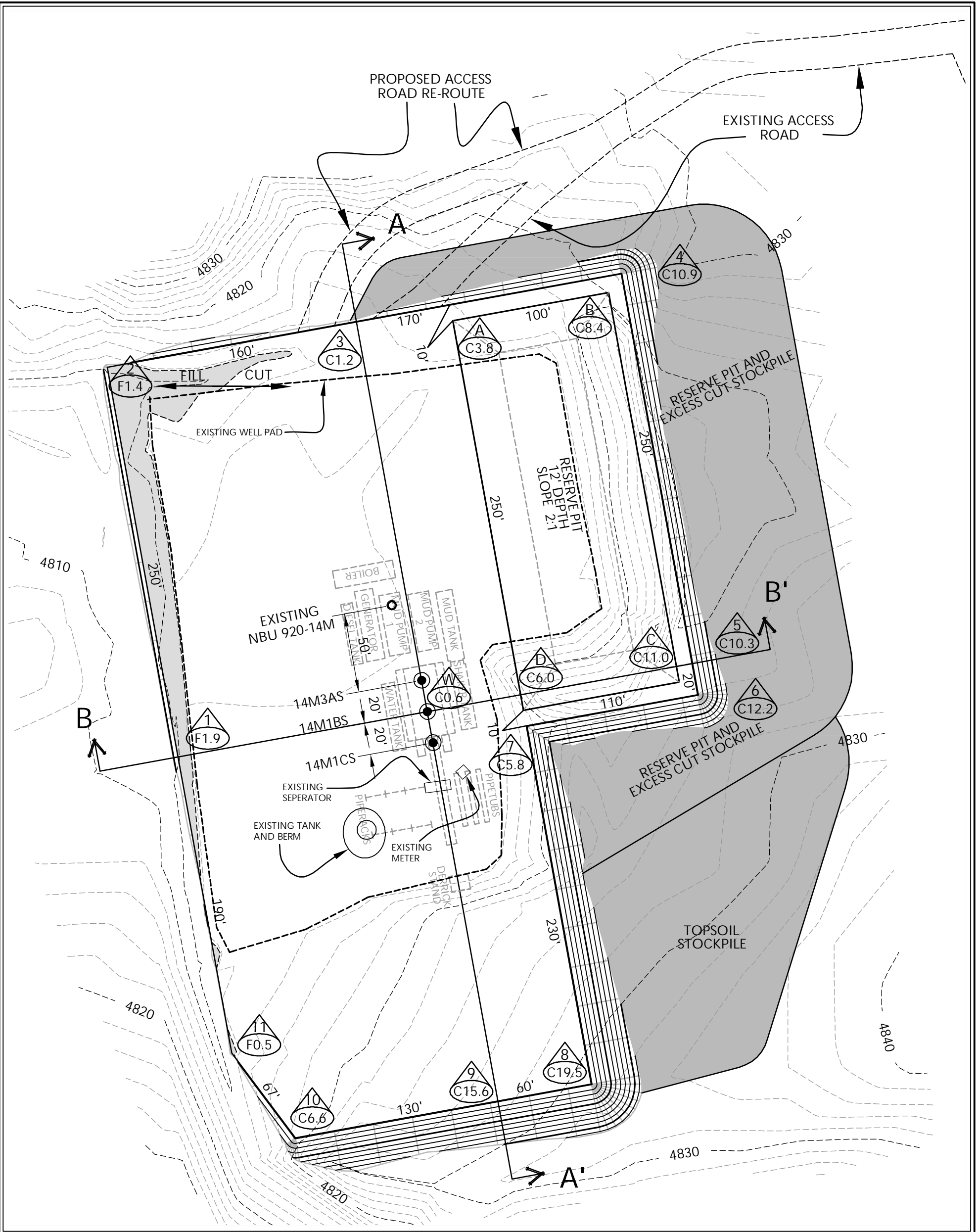


EXHIBIT A  
NBU 920-14M1BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK





WELL PAD NBU 920-14M QUANTITIES

EXISTING GRADE @ CENTER OF WELL PAD = 4812.3'  
FINISHED GRADE ELEVATION = 4811.7'  
CUT SLOPES = 1.5:1  
FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 22,010 C.Y.  
TOTAL FILL FOR WELL PAD = 499 C.Y.  
TOPSOIL @ 6" DEPTH = 1,543 C.Y.  
EXCESS MATERIAL = 21,511 C.Y.  
TOTAL DISTURBANCE = 3.65 ACRES  
SHRINKAGE FACTOR = 1.10  
SWELL FACTOR = 1.00  
RESERVE PIT CAPACITY (2' OF FREEBOARD)  
+/- 28,730 BARRELS  
RESERVE PIT VOLUME  
+/- 7,720 CY

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)



HORIZONTAL 0 30 60 1" = 60'  
2' CONTOURS

KERR-MCGEE OIL & GAS  
ONSHORE L.P.  
1099 18th Street - Denver, Colorado 80202



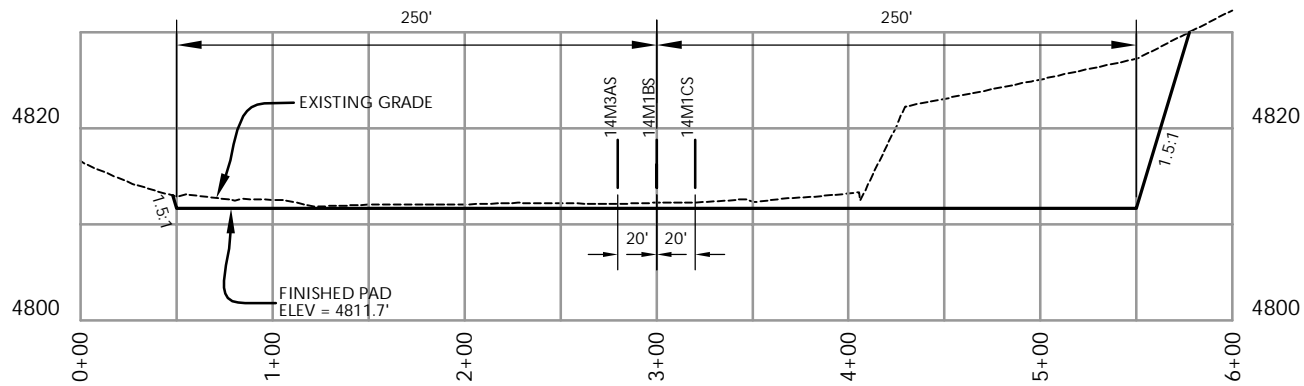
CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

Scale: 1"=60'	Date: 3/17/09	SHEET NO:
REVISED:	RW 4/6/09	5 5 OF 12

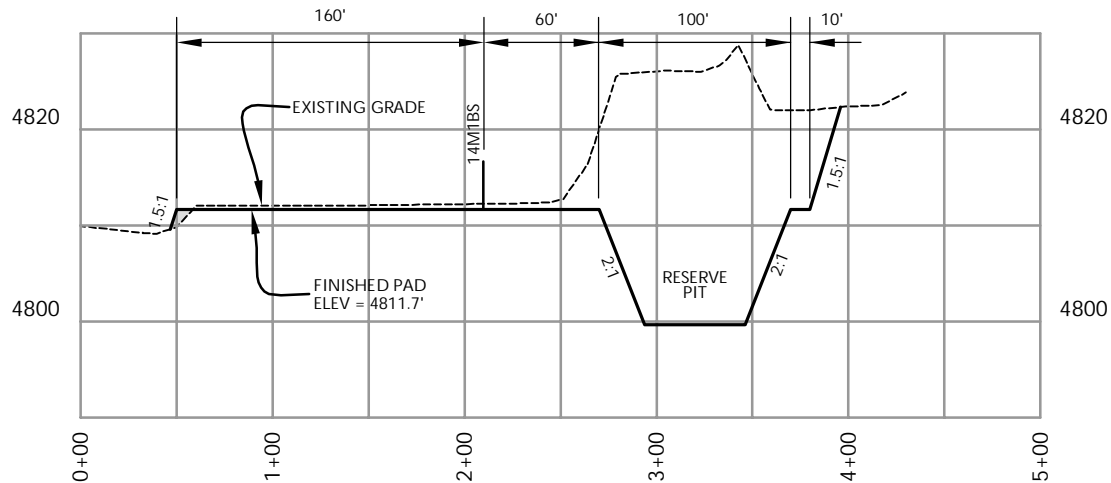
WELL PAD - LOCATION LAYOUT  
NBU 920-14M1CS,  
NBU 920-14M1BS & NBU 920-14M3AS  
LOCATED IN SECTION 14, T.9S., R.20E.  
S.L.B.&M., UINTAH COUNTY, UTAH

**Timberline** (435) 789-1365  
Engineering & Land Surveying, Inc.  
38 WEST 100 NORTH VERNAL, UTAH 84078





**CROSS SECTION A-A'**



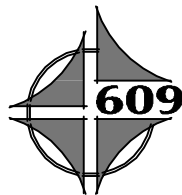
**CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS  
MAXIMUM RESERVE PIT DEPTH.

KERR-MCGEE OIL & GAS  
ONSHORE L.P.

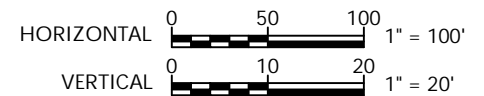
1099 18th Street - Denver, Colorado 80202

WELL PAD - CROSS SECTIONS  
NBU 920-14M1CS,  
NBU 920-14M1BS & NBU 920-14M3AS  
LOCATED IN SECTION 14, T.9S., R.20E.  
S.L.B.&M., UTAH COUNTY, UTAH



CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

Scale: 1"=100'	Date: 3/17/09	SHEET NO:
REVISED:	RW 4/6/09	6 6 OF 12



**Timberline** (435) 789-1365  
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38 WEST 100 NORTH VERNAL, UTAH 84078

'APIWellNo:43047505250000'



# WELL PAD INTERFERENCE PLAT

## DIRECTIONAL PAD - NBU 920-14M

BASIS OF BEARINGS IS THE WEST LINE OF THE SW 1/4 OF SECTION 14, T9S, R20E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°11'39"W.

### RELATIVE COORDINATES

From Surface Position to Bottom Hole

WELL	NORTH	EAST
920-14M1CS	391'	48'
920-14M1BS	752'	36'
920-14M3AS	1'	102'

**EXISTING WELL: NBU 920-14M**

**NBU 920-14M3AS**

Az. to Exist. W.H.=338.35500° 51.0'

**NBU 920-14M1BS**

Az. to Exist. W.H.=341.59417° 70.8'

**NBU 920-14M1CS**

Az. to Exist. W.H.=343.33806° 90.6'

### SURFACE POSITION FOOTAGES:

NBU 920-14M1CS  
449' FSL & 640' FWL

NBU 920-14M1BS  
468' FSL & 637' FWL

NBU 920-14M3AS  
488' FSL & 633' FWL

EXISTING WELL NBU 920-14M  
536' FSL & 615' FWL

### BOTTOM HOLE FOOTAGES

NBU 920-14M1CS  
840' FSL & 690' FWL

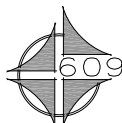
NBU 920-14M1BS  
1220' FSL & 675' FWL

NBU 920-14M3AS  
590' FSL & 635' FWL

**Kerr-McGee**  
**Oil & Gas Onshore, LP**

1099 18th Street - Denver, Colorado 80202

NBU 920-14M1CS,  
NBU 920-14M1BS & NBU 920-14M3AS  
LOCATED IN SECTION 14, T9S, R20E,  
S.L.B.&M. UINTAH COUNTY, UTAH.



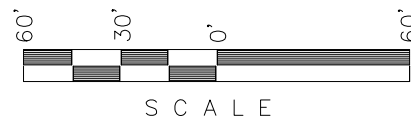
CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

LATITUDE & LONGITUDE		
Surface Position - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
920-14M1CS	40°01'45.492" 40.029303°	109°38'28.676" 109.641299°
920-14M1BS	40°01'45.687" 40.029357°	109°38'28.723" 109.641312°
920-14M3AS	40°01'45.882" 40.029412°	109°38'28.769" 109.641325°
Existing Well NBU 920-14M	40°01'46.350" 40.029542°	109°38'29.011" 109.641392°

LATITUDE & LONGITUDE		
Bottom Hole - (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
920-14M1CS	40°01'49.357" 40.030377°	109°38'28.056" 109.641127°
920-14M1BS	40°01'53.111" 40.031420°	109°38'28.267" 109.641185°
920-14M3AS	40°01'46.887" 40.029691°	109°38'28.752" 109.641320°

LATITUDE & LONGITUDE		
Surface Position - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
920-14M1CS	40°01'45.620" 40.029339°	109°38'26.185" 109.640607°
920-14M1BS	40°01'45.814" 40.029393°	109°38'26.232" 109.640620°
920-14M3AS	40°01'46.010" 40.029447°	109°38'26.277" 109.640633°
Existing Well NBU 920-14M	40°01'46.478" 40.029577°	109°38'26.519" 109.640700°

LATITUDE & LONGITUDE		
Bottom Hole - (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
920-14M1CS	40°01'49.485" 40.030412°	109°38'25.565" 109.640435°
920-14M1BS	40°01'53.239" 40.031455°	109°38'25.775" 109.640493°
920-14M3AS	40°01'47.015" 40.029726°	109°38'26.260" 109.640628°

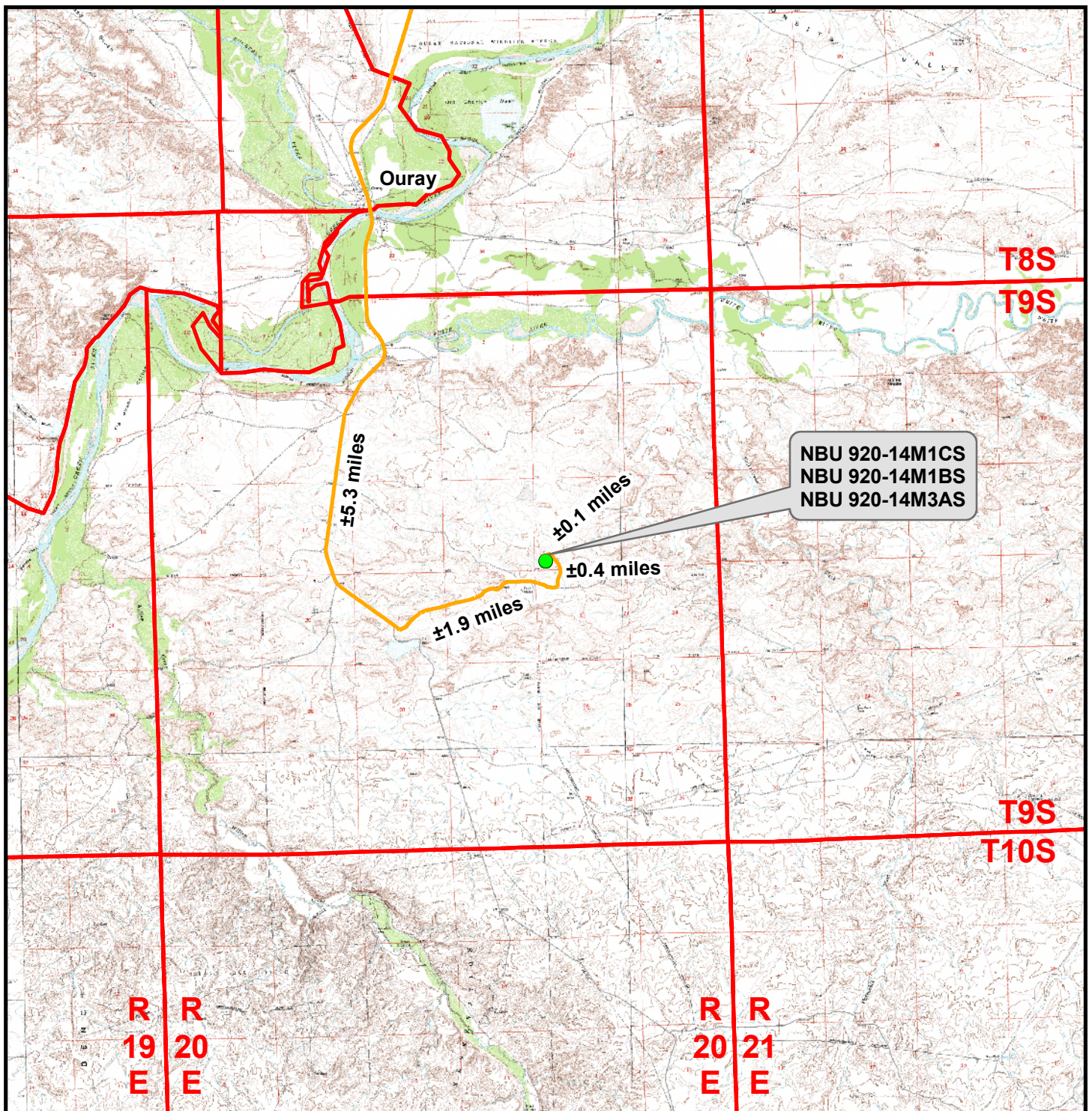


DATE SURVEYED: 01-21-09	SURVEYED BY: M.S.B.
DATE DRAWN: 02-11-09	DRAWN BY: M.W.W.
	REVISED: 03-18-09

**Timberline** (435) 789-1365  
Engineering & Land Surveying, Inc.  
209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET  
4  
OF 12





### Legend

- Proposed Well Location
- Access Route - Proposed

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**NBU 920-14M1CS,  
NBU 920-14M1BS & NBU 920-14M3AS  
Topo A  
Located In Section 14, T9S, R20E  
S.L.B.&M., Uintah County, Utah**

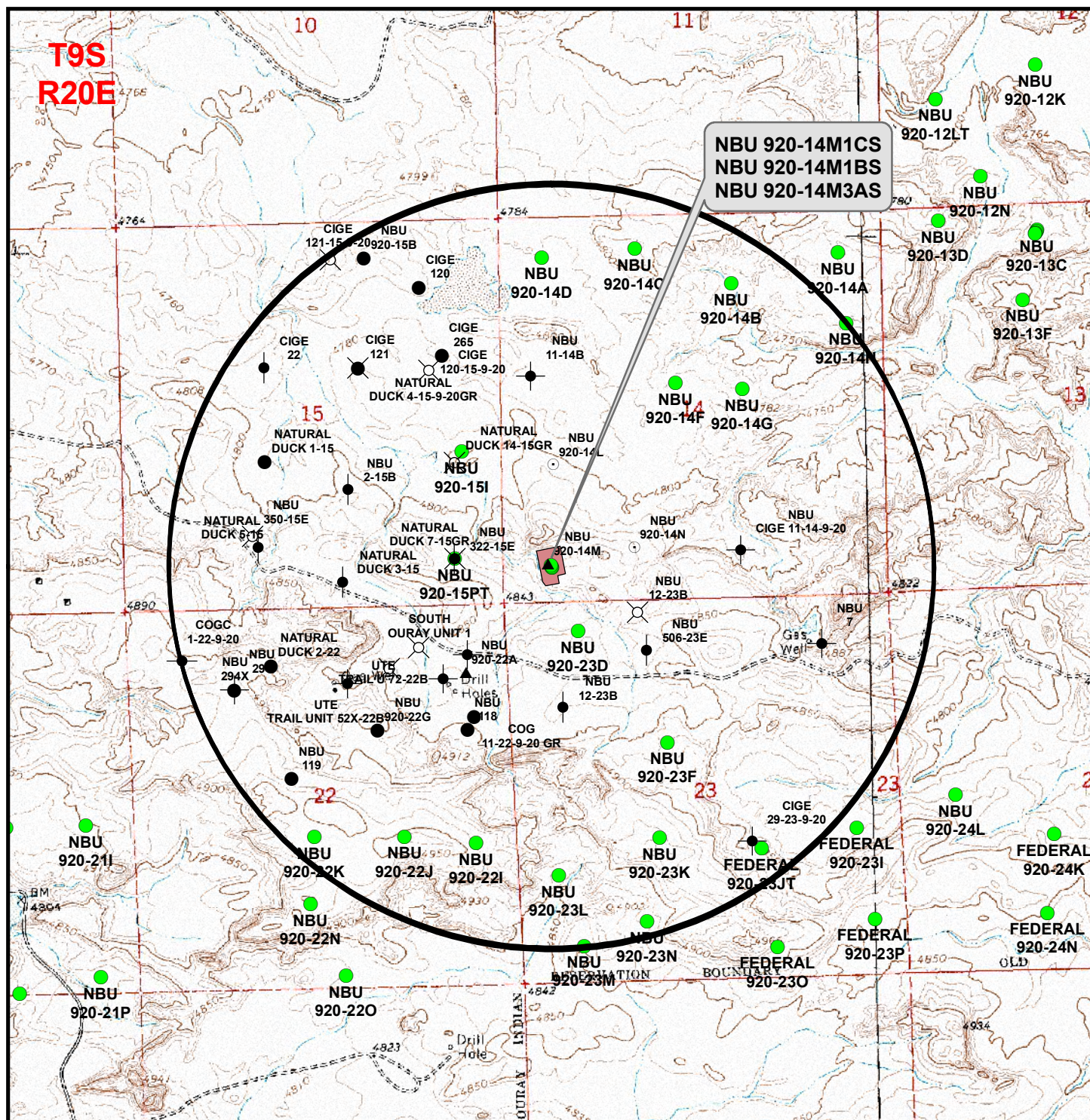


Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 6 April 2009	<b>8</b>
Revised:	Date:	8 of 12



9 9 of 12





### Legend

- |   |   |   |  |  |
|---|---|---|--|--|
| <span style="color: green;">●</span> Well - Proposed  | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Well - 1 Mile Radius | <span style="color: black;">●</span> Producing                                      | <span style="color: grey;">✕</span> Location Abandoned     | <span style="color: black;">●</span> Shut-In |
| <span style="background-color: #f08080; display: inline-block; width: 20px; height: 10px;"></span> Well Pad |   | <span style="color: black;">▲</span> Approved permit (APD); not yet spudded         | <span style="color: black;">●</span> Temporarily-Abandoned |  |
|   |   | <span style="color: black;">○</span> Spudded (Drilling commenced; Not yet complete) | <span style="color: black;">●</span> Plugged and Abandoned |  |

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**NBU 920-14M1CS,  
NBU 920-14M1BS & NBU 920-14M3AS  
Topo C  
Located In Section 14, T9S, R20E  
S.L.B.&M., Uintah County, Utah**

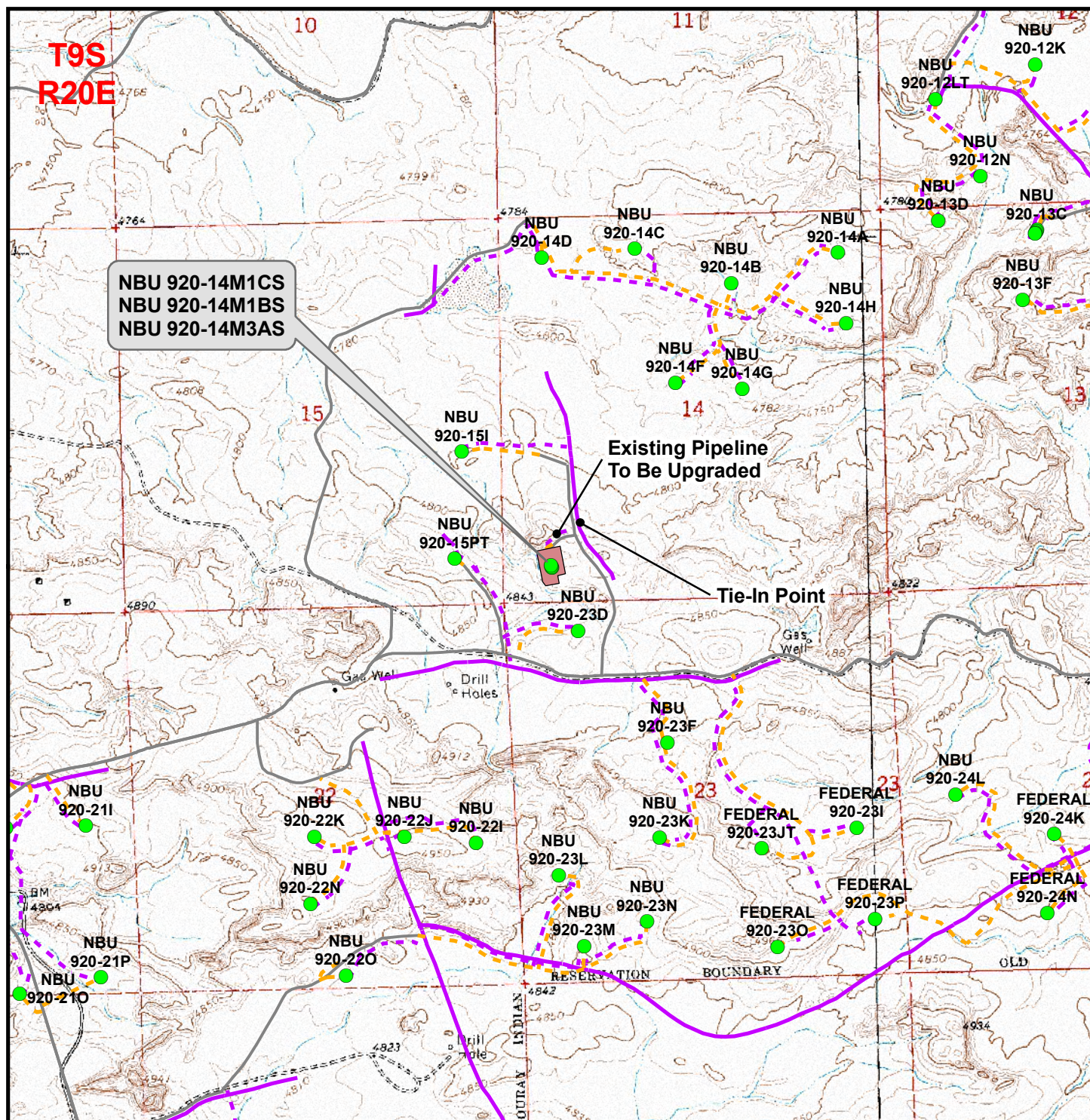
**609**  
**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



Scale: 1" = 2000ft	NAD83 USP Central
Drawn: JELO	Date: 6 April 2009
Revised:	Date:

Sheet No: <b>10</b> 10 of 12
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### Legend

- Well - Proposed
- Well Pad
- Road - Proposed
- Pipeline - Proposed
- Road - Existing
- Pipeline - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad:  $\pm 510$ ft  
 Proposed Pipeline Length Around Pad:  $\pm 660$ ft

**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street, Denver, Colorado 80202

**NBU 920-14M1CS,  
 NBU 920-14M1BS & NBU 920-14M3AS**  
**Topo D**  
**Located In Section 14, T9S, R20E**  
**S.L.B.&M., Uintah County, Utah**

  
**609**  
**CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



Scale: 1" = 2000ft	NAD83 USP Central
Drawn: JELO	Date: 6 April 2009
Revised:	Date:

Sheet No:
11
11 of 12



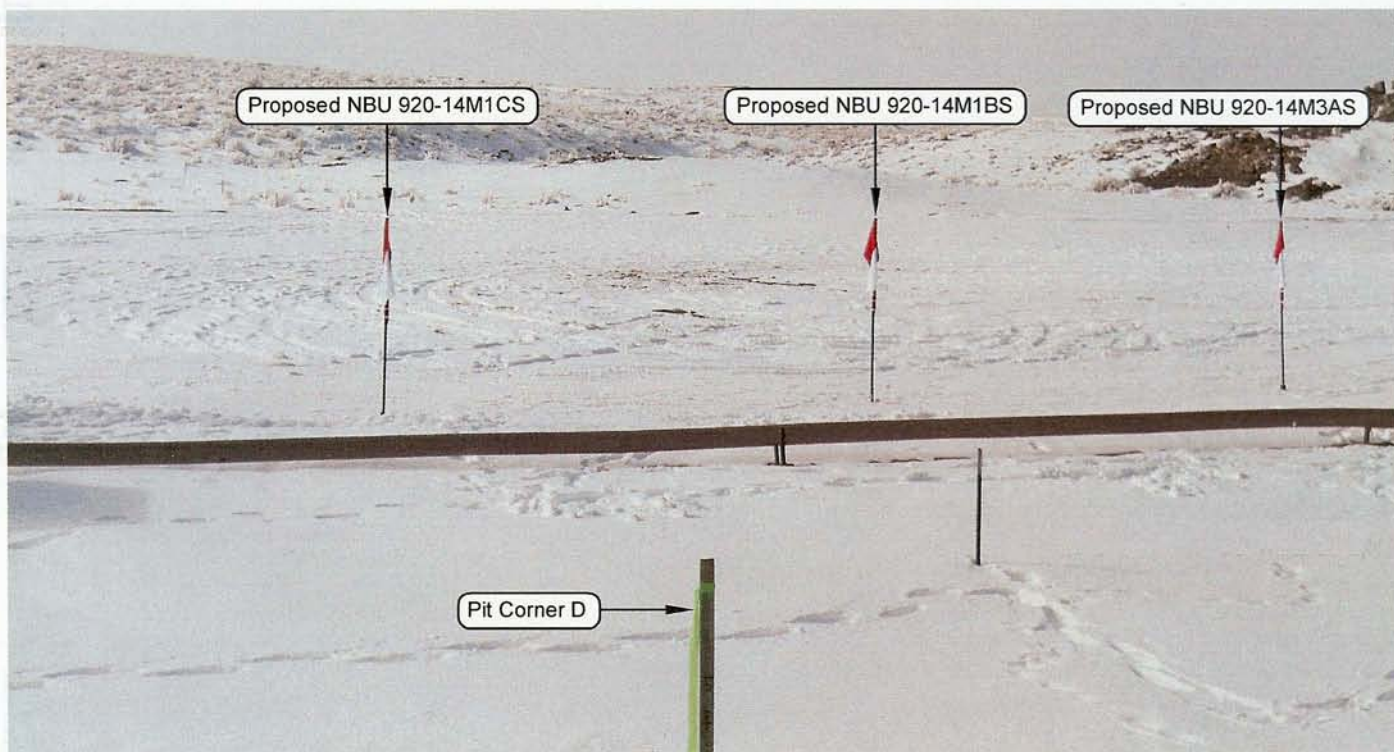


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKES

CAMERA ANGLE: NORTHWESTERLY

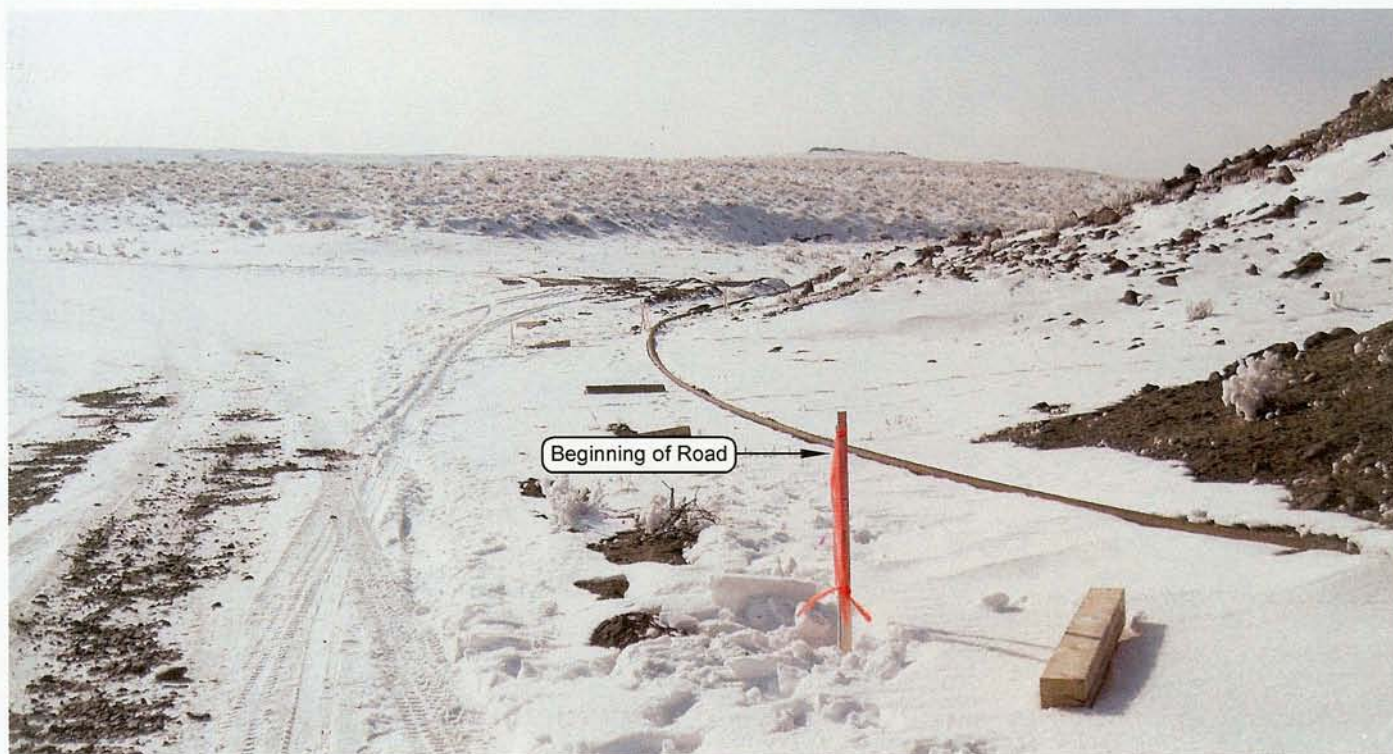


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: SOUTHWESTERLY

**Kerr-McGee**  
**Oil & Gas Onshore, LP**  
 1099 18th Street - Denver, Colorado 80202

NBU 920-14M1CS,  
 NBU 920-14M1BS & NBU 920-14M3AS  
 LOCATED IN SECTION 14, T9S, R20E,  
 S.L.B.&M. UTAH COUNTY, UTAH.



CONSULTING, LLC  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

**LOCATION PHOTOS**

TAKEN BY: M.S.B.

DRAWN BY: M.W.W.

DATE TAKEN: 01-21-09

DATE DRAWN: 02-11-09

REVISED: 3-19-09

**Timberline** (435) 789-1365  
 Engineering & Land Surveying, Inc.  
 209 NORTH 300 WEST VERNAL, UTAH 84078

**SHEET**  
**7**  
**OF 12**



**Kerr-McGee Oil & Gas Onshore, LP**  
**NBU 920-14M1CS, NBU 920-14M1BS, NBU 920-14M3AS**  
**Section 14, T9S, R20E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 5.3 MILES TO THE INTERSECTION OF A SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY, THEN EASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 1.9 MILES TO A SECOND SERVICE ROAD TO THE NORTH. EXIT LEFT AND PROCEED IN A NORTHERLY DIRECTION ALONG THE SECOND SERVICE ROAD APPROXIMATELY 0.4 MILES TO AN EXISTING WELL PAD ACCESS ROAD. EXIT LEFT AND PROCEED IN A WEST BY SOUTHWEST DIRECTION ALONG THE ACCESS ROAD APPROXIMATELY 0.1 MILES TO THE NBU 920-14M WELL PAD.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 38.4 MILES IN A SOUTHERLY DIRECTION.



**NBU 920-14M1BS**

Surface: 468' FSL, 637' FWL (SW/4SW/4)

BHL: 1,220' FSL 675' FWL (SW/4SW/4)

**NBU 920-14M1CS**

Surface: 449' FSL, 640' FWL (SW/4SW/4)

BHL: 840' FSL 690' FWL (SW/4SW/4)

**NBU 920-14M3AS**

Surface: 488' FSL, 633' FWL (SW/4SW/4)

BHL: 590' FSL 635' FWL (SW/4SW/4)

Pad: NBU 920-14M

Sec. 14 T9S R20E

Uintah, Utah

Mineral Lease: UTU 0577A

Surface Owner: Ute Indian Tribe

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN  
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. NOSs were submitted showing the surface locations in SW/4 SW/4 of Section 14 T9S R20E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on June 24, 2009. Present were:

- Verlyn Pindell and Dave Gordon – BLM;
- Kolby Kay and Mitch Batty – Timberline Surveying, Inc.
- Tony Kazeck, Jeff Samuels, Raleen White, David Liddell, and Hal Blanchard – Kerr-McGee
- Bucky Secakuku – BIA
- Nick Hall – Grasslands Consulting, Inc.
- Scott Carson – Smiling Lake Consulting
- Keith Montgomery – Montgomery Archaeological Consultants, Inc.

**Directional Drilling:**

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.



1. **Existing Roads:**

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

2. **Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 0.03$  ( $\pm 140'$ ) mile of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

*Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.*

3. **Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

4. **Location of Existing and Proposed Facilities:**

*See MDP for additional details on Existing and Proposed Facilities.*

*The following guidelines will apply if the well is productive.*

**Approximately  $\pm 1,170'$  of new pipeline is proposed. Refer to Topo D for the existing pipeline.**

Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

5. **Location and Type of Water Supply:**

*See MDP for additional details on Location and Type of Water Supply.*

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, Application number 53617. Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

6. **Source of Construction Materials:**

*See MDP for additional details on Source of Construction Materials.*

7. **Methods of Handling Waste Materials:**

*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:



RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E

**8. Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

**9. Well Site Layout:** (See Location Layout Diagram)

*See MDP for additional details on Well Site Layout.*

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

**10. Plans for Reclamation of the Surface:**

*See MDP for additional details on Plans for Reclamation of the Surface.*

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

**11. Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe  
PO Box 70  
Fort Duchesne, Utah 84026  
435-722-5141



The mineral ownership is listed below:

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
435-781-4400

**12. Other Information:**

*See MDP for additional details on Other Information.*



**13. Lessee's or Operators' Representative & Certification:**

Kathy Schneebeck Dulnoan  
Staff Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6007

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Kathy Schneebeck Dulnoan

June 29, 2009  
Date





## Kerr-McGee Oil & Gas Onshore LP

1099 18th Street, Suite 1800  
Denver, CO 80202-1918  
P.O. Box 173779  
Denver, CO 80217-3779  
720-929-6000

June 9, 2009

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 920-14M1BS  
T9S-R20E  
Section 14: SWSW (Surf & BH)  
Surface: 468' FSL, 637' FWL  
Bottom Hole: 1220' FSL, 675' FWL  
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 920-14M1BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,  
**KERR-MCGEE OIL & GAS ONSHORE LP**

A handwritten signature in red ink, appearing to read 'Lynn Padgett', is written over the typed name.

Lynn Padgett  
Staff Landman

enclosures



CLASS I REVIEW OF KERR-MCGEE OIL & GAS  
ONSHORE LP'S 14 PROPOSED WELL LOCATIONS  
AND ACCESS/PIPELINE REROUTE IN  
T9S, R20E, SECTIONS 12, 13, 14, 20, 21, AND 24  
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Ute Indian Tribe  
Uintah and Ouray Agency

Prepared Under Contract With:

Kerr-McGee Oil & Gas Onshore LP  
1368 South 1200 East  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 09-025

April 2, 2009

United States Department of Interior (FLPMA)  
Permit No. 08-UT-60122

Public Lands Policy Coordination Office  
Archaeological Survey Permit No. 117



# **Paleontological Assessment for Anadarko Petroleum Corp.**

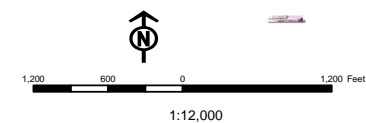
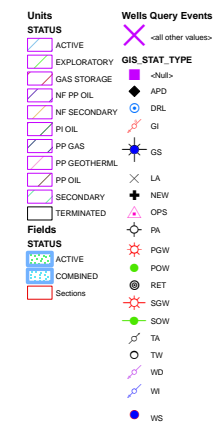
NBU 920-14M3AS, M1CS, M1BS  
Ouray Quadrangle  
Uintah County, Utah

Prepared for  
**Anadarko Petroleum Corp.**  
and  
**Ute Tribe**  
**Uintah and Ouray Reservation**

Prepared by  
**SWCA Environmental Consultants**  
SWCA #UT09-14314-61



Map Produced by Diana Mason





# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

### IN REPLY REFER TO:

3160  
(UT-922)

July 2, 2009

### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50522	NBU 920-12M4CS Sec 13	T09S R20E 0422 FNL 2135 FWL
	BHL Sec 12	T09S R20E 0240 FSL 0675 FWL
43-047-50523	NBU 920-13C1AS Sec 13	T09S R20E 0389 FNL 2156 FWL
	BHL Sec 13	T09S R20E 0170 FNL 2600 FWL
43-047-50524	NBU 920-13C4BS Sec 13	T09S R20E 0405 FNL 2146 FWL
	BHL Sec 13	T09S R20E 0920 FNL 2100 FWL
43-047-50525	NBU 920-14M1BS Sec 14	T09S R20E 0468 FSL 0637 FWL
	BHL Sec 14	T09S R20E 1220 FSL 0675 FWL
43-047-50527	NBU 920-14M3AS Sec 14	T09S R20E 0488 FSL 0633 FWL
	BHL Sec 14	T09S R20E 0590 FSL 0635 FWL
43-047-50528	NBU 921-22C1CS Sec 15	T09S R21E 0359 FSL 2133 FWL
	BHL Sec 22	T09S R21E 0446 FNL 2071 FWL
43-047-50529	NBU 921-22C4BS Sec 15	T09S R21E 0360 FSL 2153 FWL
	BHL Sec 22	T09S R21E 0812 FNL 2065 FWL
43-047-50530	NBU 921-22D1BS Sec 15	T09S R21E 0357 FSL 2093 FWL
	BHL Sec 22	T09S R21E 0226 FNL 0819 FWL
43-047-50531	NBU 921-22D1CS Sec 15	T09S R21E 0358 FSL 2113 FWL



BHL Sec 22 T09S R21E 0566 FNL 0789 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File – Natural Buttes Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:7-2-09



# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 6/30/2009

**API NO. ASSIGNED:** 43047505250000

**WELL NAME:** NBU 920-14M1BS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** SWSW 14 090S 200E

**Permit Tech Review:** ☒

**SURFACE:** 0468 FSL 0637 FWL

**Engineering Review:** ☒

**BOTTOM:** 1220 FSL 0675 FWL

**Geology Review:** ☒

**COUNTY:** Uintah

**LATITUDE:** 40.02933

**LONGITUDE:** -109.64069

**UTM SURF EASTINGS:** 615986.00

**NORTHINGS:** 4431687.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 0577A

**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 2 - Indian

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

- ☒ **PLAT**
- ☒ **Bond:** FEDERAL - WYB000291
- ☐ **Potash**
- ☒ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☒ **Water Permit:** Permit #43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☒ **Intent to Commingle**

**Commingle Approved**

### LOCATION AND SITING:

- ☐ **R649-2-3.**
- Unit:** NATURAL BUTTES
- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☒ **Drilling Unit**
- Board Cause No:** Cause 173-14
- Effective Date:** 12/2/1999
- Siting:** 460' fr u bdry & uncomm. tract
- ☒ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:**  
3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
15 - Directional - dmason  
17 - Oil Shale 190-5(b) - dmason





JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 920-14M1BS  
**API Well Number:** 43047505250000  
**Lease Number:** UTU 0577A  
**Surface Owner:** INDIAN  
**Approval Date:** 7/16/2009

**Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingling:**

In accordance with Board Cause No. 173-14 commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.



**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

OR

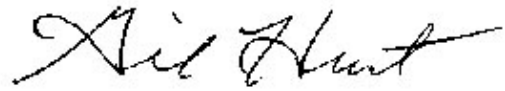
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "Gil Hunt", with a stylized, cursive script.

Gil Hunt  
Associate Director, Oil & Gas



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

JUN 30 2009

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010APPLICATION FOR PERMIT TO DRILL OR REENTER **BLM**

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU0577A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERRMCGEE OIL&GAS ONSHORE LP Contact: DANIELLE E PIERNOT Email: Danielle.Piernot@anadarko.com		7. If Unit or CA Agreement, Name and No. 891008900A
3a. Address PO BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 920-14M1BS
3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156		9. API Well No. 43 047 50525
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSW 468FSL 637FWL 40.02936 N Lat, 109.64131 W Lon At proposed prod. zone SWSW 1220FSL 675FWL 40.03142 N Lat, 109.64118 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 12 MILES SOUTHEAST OF OURAY, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 14 T9S R20E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 675 FEET	16. No. of Acres in Lease 2091.20	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 380 FEET	19. Proposed Depth 10670 MD 10788 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4812 GL	22. Approximate date work will start 07/20/2009	17. Spacing Unit dedicated to this well
20. BLM/BIA Bond No. on file WYB000291		23. Estimated duration 60-90 DAYS

## 24. Attachments

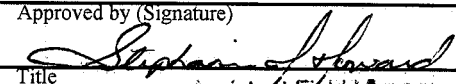
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-6156	Date 06/30/2009
--	---	--------------------

Title  
REGULATORY ANALYST

Approved by (Signature) 	Name (Printed/Typed) Stephanie J Howard	Date 12/21/09
---	--	------------------

Title  
Acting Assistant Field Manager  
Lands & Mineral Resources

VERNAL FIELD OFFICE

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.**CONDITIONS OF APPROVAL ATTACHED**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #71507 verified by the BLM Well Information System  
For KERRMCGEE OIL&GAS ONSHORE LP, sent to the Vernal  
Committed to AFMSS for processing by GAIL JENKINS on 07/02/2009 ()

NOTICE OF APPROVAL

DEC 24 2009

NOS applied 7/6/09

DIV. OF OIL, GAS &amp; MINING

AFMSS#

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

096XJ5108AE







UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: Kerr McGee Oil & Gas Onshore, LP      Location: SWSW, Sec. 14, T9S, R20E (S)  
Well No: NBU 920-14M1BS      Lease No: SWSW, Sec. 14, T9s, R20E (B)  
API No: 43-047-50525      Agreement: UTU-0577A  
Natural Buttes Unit

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:ut_vn_opreport@blm.gov">ut_vn_opreport@blm.gov</a> .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

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DIV OF OIL, GAS & MINING



**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**Site-Specific Conditions of Approval:**

1. Paint New facilities "shadow gray."
2. Construct diversion drainages around well pad.
3. Remove the existing 4" pipeline.
4. Clean up trash on the well pad.
5. Monitor location by a permitted archaeologist during the construction process.
6. In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix D), a raptor survey shall be conducted prior to construction of the proposed location, pipeline, or access road if construction will take place during raptor nesting season (January 01 through September 30) and conduct its operations according to specification in the guidelines.
7. If project construction operation are scheduled to occur after June 18, 2010, KMG will conduct additional biological surveys in accordance with the guidelines specified I the USFWS Rare Plant Conservation Measures for Uinta Basin hookless cactus (See Appendix D) and conduct its operation according to its specifications.

**BIA Standard Conditions of Approval:**

1. Soil erosion will be mitigated by reseeding all disturbed areas.
2. The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.
3. An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be sued in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.
4. The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.
5. A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
6. Major low water crossings will be armored with pit run material to protect them from erosion.
7. All personnel shall refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.

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DEC 24 2009

DEPT OF OIL, GAS & MINING



8. If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
9. Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.
10. Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.
11. If project construction operations are scheduled to occur after December 31, 2009, KMG shall conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix E) and conduct its operations according to applicable seasonal restrictions and spatial offsets.
12. USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix E).
13. All personnel shall refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
14. If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

RECEIVED

DEC 24 2009

DIV. OF OIL, GAS & MINING



**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

- A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

DEC 24 2009



- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

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DIV. OF OIL, GAS & MINING



## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (1/4, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

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DIV. OF OIL, GAS & MINING



- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.
- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

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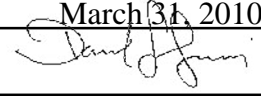
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

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**DIV. OF OIL, GAS & MINING**



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-14M1BS			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0468 FSL 0637 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 14 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505250000			
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>					
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/5/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input checked="" type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION            OTHER: ACTS/ Pit refurb         </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: ACTS/ Pit refurb
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this multi-well pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an ACTS staging pit to be utilized for other completion operations in the area. There will be 2-400 bbl skim tanks placed on the location. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the skim tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections. Thank you.					
<b>NAME (PLEASE PRINT)</b> Danielle Piernot		<b>PHONE NUMBER</b> 720 929-6156			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst			
<b>DATE</b> 3/24/2010		<b>Accepted by the Utah Division of Oil, Gas and Mining</b> <b>Date:</b> March 31, 2010 <b>By:</b> 			



## DIVISION OF OIL, GAS AND MINING

### SPUDDING INFORMATION

Name of Company: KERR-McGEE OIL & GAS ONSHORE, L.P.

Well Name: NBU 920-14M1BS

Api No: 43-047-50525 Lease Type: FEDERAL

Section 14 Township 09S Range 20E County UINTAH

Drilling Contractor PETE MARTIN DRIG RIG # BUCKET

### SPUDDED:

Date 03/24/2010

Time 12:00 NOON

How DRY

**Drilling will Commence:** \_\_\_\_\_

Reported by JAMES GOBER

Telephone # (435) 828-7024

Date 03/24/2010 Signed CHD



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-14M1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0468 FSL 0637 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 14 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505250000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>  <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/24/2010  <input type="checkbox"/> DRILLING REPORT Report Date:	<b>TYPE OF ACTION</b>  <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION            OTHER:         </div> </div>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 3/24/2010 AT 12:00 HRS.		
<b>Accepted by the</b> <b>Utah Division of</b> <b>Oil, Gas and Mining</b> <b>FOR RECORD ONLY</b> March 29, 2010		
<b>NAME (PLEASE PRINT)</b> Andy Lytle		<b>PHONE NUMBER</b> 720 929-6100
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst
<b>DATE</b> 3/25/2010		



**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6100

**Well 1**

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304750527	NBU 920-14M3AS	SWSW	14	9S	20E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
<u>B</u>	99999	<u>2910</u>	3/24/2010	<u>4/1/10</u>		
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 3/24/2010 AT 9:00 HRS. <u>BHL = SWSW</u>						

**Well 2**

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304750525	NBU 920-14M1BS	SWSW	14	9S	20E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	3/24/2010	<u>4/1/10</u>		
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 3/24/2010 AT 12:00 HRS. <u>BHL = SWSW</u>						

**Well 3**

API Number	Well Name	QQ	Sec	Twp	Rng	County
4304750526	NBU 920-14M1CS	SWSW	14	9S	20E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date		
<u>B</u>	99999	<u>2900</u>	3/24/2010	<u>4/1/10</u>		
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 3/24/2010 AT 15:00 HRS. <u>BHL = SWSW</u>						

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

**RECEIVED**

**MAR 25 2010**

ANDY LYTLE

Name (Please Print)

Signature

REGULATORY ANALYST

Title

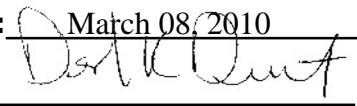
3/25/2010

Date



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-14M1BS
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<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 4/7/2010	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>TUBING REPAIR</b>	
	<input type="checkbox"/> <b>WATER SHUTOFF</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>ALTER CASING</b>	<input type="checkbox"/> <b>CASING REPAIR</b>
	<input type="checkbox"/> <b>CHANGE TUBING</b>	<input type="checkbox"/> <b>CHANGE WELL NAME</b>
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	<input type="checkbox"/> <b>CONVERT WELL TYPE</b>
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	<input type="checkbox"/> <b>NEW CONSTRUCTION</b>
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	<input type="checkbox"/> <b>PLUG BACK</b>
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	<input type="checkbox"/> <b>RECOMPLETE DIFFERENT FORMATION</b>
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	<input type="checkbox"/> <b>TEMPORARY ABANDON</b>
	<input type="checkbox"/> <b>VENT OR FLARE</b>	<input type="checkbox"/> <b>WATER DISPOSAL</b>
	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	<input type="checkbox"/> <b>APD EXTENSION</b>
	<input type="checkbox"/> <b>OTHER</b>	OTHER:
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> MIRU PROPETRO AIR RIG ON 4/5/2010. DRILLED 12-1/4" SURFACE HOLE TO 2740'. RAN 9-5/8" 36# J55 SURFACE CSG. PUMP 150 BBLS H2O, PUMP 20 BBLS OF GEL WATER. PUMP 260 SX CLASS G HI FILL LEAD CMT @ 11.0 PPG, 3.82 YD. TAILED CMT W/200 SX CLASS G PREM LITE CMT @ 15.8 PPG, 1.05 YD. DROP PLUG ON FLY, DISPLACE W/203 BBLS OF H2O, 500 PSI OF H2O. BUMP PLUG W/900 PSI, FLOAT HELD. CIRC THROUGH OUT JOB. 20 BBLS LEAD TO SURFACE. TOP OUT THROUGH 1" W/150 SX CLASS G PREM LITE @ 15.8 PPG. CMT STAYED AT SURFACE. WORT.		
<b>Accepted by the</b> <b>Utah Division of</b> <b>Oil, Gas and Mining</b> <b>FOR RECORD ONLY</b> April 12, 2010		
<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/8/2010	



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
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<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-14M1BS			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0468 FSL 0637 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 14 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505250000			
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>					
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 3/8/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION            OTHER:         </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER:
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) respectfully requests to change the drilling program for this well. The production casing will still be cemented it's entire length to the surface. Please see the attached drilling program for additional details. All other information remains the same. Please contact the undersigned with any questions and/or comments. Thank you.					
<b>Accepted by the Utah Division of Oil, Gas and Mining</b>		<b>Date:</b> March 08, 2010 <b>By:</b> 			
<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst			
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/4/2010				









# KERR-McGEE OIL & GAS ONSHORE LP

## DRILLING PROGRAM

### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2,660	36.00	J-55	LTC	0.77	1.62	6.02
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9,768	11.60	I-80	BTC	1.72	0.92	2.55
						10,690	8,650	279,000
	4-1/2"	9,768 to 10,788	11.60	HCP-110	LTC	47.64	1.26	29.09

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.4 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 4,411 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.4 ppg)

0.63 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 6,833 psi**

### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	TAIL	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
			+ 0.25 pps flocele				
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
Option 2	LEAD	2,160'	65/35 Poz + 6% Gel + 10 pps gilsonite	510	35%	12.60	1.81
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	180	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,668'	Premium Lite II + 3% KCl + 0.25 pps	440	40%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,120'	50/50 Poz/G + 10% salt + 2% gel	1,500	40%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

DATE:

DRILLING SUPERINTENDENT:

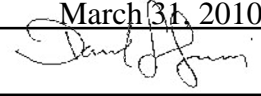
John Merkel / Lovel Young

DATE:



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-14M1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0468 FSL 0637 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 14 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505250000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH
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<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>ALTER CASING</b>	
<input checked="" type="checkbox"/> <b>SPUD REPORT</b> Date of Spud: 3/24/2010	<input type="checkbox"/> <b>CASING REPAIR</b>	
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
	<input type="checkbox"/> <b>CHANGE TUBING</b>	
	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	
	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	
	<input type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	
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	<input type="checkbox"/> <b>WATER SHUTOFF</b>	
	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>OTHER:</b>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON 3/24/2010 AT 12:00 HRS.		
<b>Accepted by the</b> <b>Utah Division of</b> <b>Oil, Gas and Mining</b> <b>FOR RECORD ONLY</b> March 29, 2010		
<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 3/25/2010	



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
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<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/5/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input checked="" type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION            OTHER: ACTS/ Pit refurb         </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: ACTS/ Pit refurb
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this multi-well pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an ACTS staging pit to be utilized for other completion operations in the area. There will be 2-400 bbl skim tanks placed on the location. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the skim tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections. Thank you.					
<b>NAME (PLEASE PRINT)</b> Danielle Piernot		<b>PHONE NUMBER</b> 720 929-6156			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst			
<b>DATE</b> 3/24/2010		<b>Accepted by the Utah Division of Oil, Gas and Mining</b> <b>Date:</b> March 31, 2010 <b>By:</b> 			



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<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 4/7/2010	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
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	<input type="checkbox"/> <b>APD EXTENSION</b>	
	OTHER:	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> MIRU PROPETRO AIR RIG ON 4/5/2010. DRILLED 12-1/4" SURFACE HOLE TO 2740'. RAN 9-5/8" 36# J55 SURFACE CSG. PUMP 150 BBLS H2O, PUMP 20 BBLS OF GEL WATER. PUMP 260 SX CLASS G HI FILL LEAD CMT @ 11.0 PPG, 3.82 YD. TAILED CMT W/200 SX CLASS G PREM LITE CMT @ 15.8 PPG, 1.05 YD. DROP PLUG ON FLY, DISPLACE W/203 BBLS OF H2O, 500 PSI OF H2O. BUMP PLUG W/900 PSI, FLOAT HELD. CIRC THROUGH OUT JOB. 20 BBLS LEAD TO SURFACE. TOP OUT THROUGH 1" W/150 SX CLASS G PREM LITE @ 15.8 PPG. CMT STAYED AT SURFACE. WORT.		
<div style="text-align: right; font-weight: bold; font-size: 1.2em;">         Accepted by the          Utah Division of          Oil, Gas and Mining  <b>FOR RECORD ONLY</b>          April 12, 2010       </div>		
<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/8/2010	



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-14M1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0468 FSL 0637 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 14 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505250000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 5/21/2010	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>TUBING REPAIR</b>	
	<input type="checkbox"/> <b>WATER SHUTOFF</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>ALTER CASING</b>	
	<input type="checkbox"/> <b>CHANGE TUBING</b>	
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	
	<input type="checkbox"/> <b>VENT OR FLARE</b>	
	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	
	<input type="checkbox"/> <b>OTHER</b>	
	<input type="checkbox"/> <b>CASING REPAIR</b>	
	<input type="checkbox"/> <b>CHANGE WELL NAME</b>	
	<input type="checkbox"/> <b>CONVERT WELL TYPE</b>	
	<input type="checkbox"/> <b>NEW CONSTRUCTION</b>	
	<input type="checkbox"/> <b>PLUG BACK</b>	
	<input type="checkbox"/> <b>RECOMPLETE DIFFERENT FORMATION</b>	
	<input type="checkbox"/> <b>TEMPORARY ABANDON</b>	
	<input type="checkbox"/> <b>WATER DISPOSAL</b>	
	<input type="checkbox"/> <b>APD EXTENSION</b>	
	OTHER:	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> FINISHED DRILLING FROM 2740' TO 10834' ON MAY 19, 2010. RAN 4 1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 1205 764 SX CLASS G PREM LITE @ 12.9 PPG, 1.81YD. TAILED CEMENT W/ 1205 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YD. DISPLACED W/ 168 BBLS WATER, BUMPED PLUG, FLOATS HELD. RETURNED 1 BBL CEMENT TO SURFACE. RD CEMENTERS AND CLEANED PITS. RELEASED ENSIGN RIG #145 ON MAY 21, 2010 @ 23:59 HRS.		
<b>Accepted by the Utah Division of Oil, Gas and Mining</b> <b>FOR RECORD ONLY</b> June 01, 2010		
<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 5/25/2010	



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-14M1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0468 FSL 0637 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 14 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505250000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 7/2/2010	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input checked="" type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>TUBING REPAIR</b>	
	<input type="checkbox"/> <b>WATER SHUTOFF</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>ALTER CASING</b>	
	<input type="checkbox"/> <b>CHANGE TUBING</b>	
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	
	<input type="checkbox"/> <b>VENT OR FLARE</b>	
	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	
	<input type="checkbox"/> <b>OTHER</b>	
	<input type="checkbox"/> <b>CASING REPAIR</b>	
	<input type="checkbox"/> <b>CHANGE WELL NAME</b>	
	<input type="checkbox"/> <b>CONVERT WELL TYPE</b>	
	<input type="checkbox"/> <b>NEW CONSTRUCTION</b>	
	<input type="checkbox"/> <b>PLUG BACK</b>	
	<input type="checkbox"/> <b>RECOMPLETE DIFFERENT FORMATION</b>	
	<input type="checkbox"/> <b>TEMPORARY ABANDON</b>	
	<input type="checkbox"/> <b>WATER DISPOSAL</b>	
	<input type="checkbox"/> <b>APD EXTENSION</b>	
	OTHER:	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> THE SUBJECT WELL WAS PLACED ON PRODUCTION ON JULY 2, 2010 AT 11:15 A.M. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
<b>Accepted by the</b> <b>Utah Division of</b> <b>Oil, Gas and Mining</b> <b>FOR RECORD ONLY</b> July 06, 2010		
<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/2/2010	



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.  
UTU0577A1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other  
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.  
Other \_\_\_\_\_

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator  
KERR-MCGEE OIL&GAS ONSHORE  
Contact: ANDY LYTLE  
Email: andrew.lytle@anadarko.com8. Lease Name and Well No.  
NBU 920-14M1BS3. Address  
P.O. BOX 173779  
DENVER, CO 802173a. Phone No. (include area code)  
Ph: 720-929-61009. API Well No.  
43-047-505254. Location of Well (Report location clearly and in accordance with Federal requirements)\*  
At surface SWSW 468FSL 637FWL 40.02939 N Lat, 109.64062 W Lon  
At top prod interval reported below SWSW 1236FSL 662FWL  
At total depth SWSW 1197FSL 673FWL  
*Per HSM Review*10. Field and Pool, or Exploratory  
NATURAL BUTTES11. Sec., T., R., M., or Block and Survey  
or Area Sec 14 T9S R20E Mer SLB12. County or Parish  
UINTAH13. State  
UT14. Date Spudded  
03/24/201015. Date T.D. Reached  
05/19/201016. Date Completed  
☐ D & A ☒ Ready to Prod.  
07/02/201017. Elevations (DF, KB, RT, GL)\*  
4812 GL18. Total Depth: MD 10834  
TVD 10744.519. Plug Back T.D.: MD 10827  
TVD 10733.920. Depth Bridge Plug Set: MD  
TVD21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
ACOUSTIC CBL-CHI, RPM22. Was well cored? ☒ No ☐ Yes (Submit analysis)  
Was DST run? ☒ No ☐ Yes (Submit analysis)  
Directional Survey? ☐ No ☒ Yes (Submit analysis)

## 23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STEEL	36.7		40		28			
12.250	9.625 IJ55	36.0		2711		610			
7.875	4.500 I80	11.6		10828		1969			

## 24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	10153							

## 25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	8722	10654	8722 TO 10654	0.360	284	OPEN
B) WSMVD						
C)						
D)						

## 26. Perforation Record

## 27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
8722 TO 10654	PUMP 9,233 BBLs SLICK H2O & 326,460 LBS 30/50 SAND.

## 28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
07/02/2010	07/05/2010	24	→	0.0	2177.0	480.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
16/64		3000.0	→	0	2177	480		PGW	

## 28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

RECEIVED

AUG 16 2010

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #90594 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

DIV. OF OIL, GAS &amp; MINING

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*



## 28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)  
SOLD

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1694 1866 2489 5241 8558	8557 10834	TD		

## 32. Additional remarks (include plugging procedure):

ATTACHED IS THE CHRONOLOGICAL WELL HISTORY AND FINAL SURVEY.

## 33. Circle enclosed attachments:

- |   |                    |               |                       |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.)     | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis   | 7 Other:      |                       |

## 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #90594 Verified by the BLM Well Information System.  
For KERR-MCGEE OIL&GAS ONSHORE, LP, sent to the Vernal

Name (please print) ANDY LYTLE

Title REGULATORY ANALYST

Signature  (Electronic Submission)

Date 07/30/2010

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 920-14M1BS [BLUE]			Spud Conductor: 3/24/2010				Spud Date: 4/5/2010	
Project: UTAH-UINTAH			Site: NBU 920-14M PAD				Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLING			Start Date: 3/22/2010				End Date: 5/21/2010	
Active Datum: RKB @4,825.01ft (above Mean Sea Leve			UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/5/2010	2:30 - 7:30	5.00	MIRU	01	B	P		DRESS CONDUCTOR, INSTALL AIR BOWL, RIG UP RIG, BUILD DITCH, RIG UP PUMP. PRIME PUMPS, P/U MOTOR 016 RPG 2012 DEG. SN 8019, M/U 12.25" HC507Z, SN 7015010 1ST RUN.
	7:30 - 0:00	16.50	DRLSUR	02	C	P		DRILL 12.25" SURFACE HOLE F/44-1210' (1166' 70'/HR) WOB 20K, ROT 45, DH RPM 88, 550 GPM, PSI ON/ OFF 1500/1200, UP/ DOWN/ ROT 59/51/55
4/6/2010	0:00 - 21:30	21.50	DRLSUR	02	C	P		0DRILL 12.25" SURFACE HOLE F/1210'-2530' (1320 61'/HR) WOB 20K, ROT 45, DH RPM 88, 550 GPM, PSI ON/ OFF 1500/1200, UP/ DOWN/ ROT 72/68/70
	21:30 - 0:00	2.50	MAINT	08	A	X		HYDRAULIC PUMP BROKE DOWN, WAITING FOR MECHANIC
4/7/2010	0:00 - 4:30	4.50	DRLSUR	02	D	P		DRILL 12.25 SURFACE HOLE F'2530'- 2740' (210' 47'/HR) WOB 20K, ROT 45, DH RPM 88, 550 GPM, PSI ON/ OFF 1500/1200, UP/ DOWN/ ROT 82/70/75
	4:30 - 6:00	1.50	DRLSUR	05	A	P		CIRC HOE BEFORE LDDS & BHA
	6:00 - 10:30	4.50	DRLSUR	06	A	P		LDDS & BHA, BREAK DOWN ALL DIR TOOL
	10:30 - 15:30	5.00	CSG	12	C	P		RU AND RUN 62 JTS 9.625" J55 #36 LTC SURFACE CSG, CSG SHOE @ 2702', BAFFLE @ 2660'
	15:30 - 19:30	4.00	CSG	12	B	P		HOLD SAFETY MEETING, PRESSURE TEST LINES TO 2000 PSI. PUMP 150 BBLS H2O, PUMP 20 BBLS OF GEL WATER. PUMP 260 SX (176 BBLS) OF 11#, 3.82 YD, 23 GAL/SK HI FILL LEAD CEMENT. PUMP 200 SX(40 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK 2% CALC 1/4# FLOCELE TAIL CEMENT. DROP PLUG ON FLY, DISPLACE W/ 203 BBLS OF H2O. 500 PSI OF LIFT. BUMP PLUG W/ 900 PSI, FLOAT HELD. CIRC THROUGH OUT JOB. 20 BBLS LEAD TO SURFACE. TOP OUT THROUGH 1" W/ 150 SX (25.6 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK 4% CALC. CMT STAYED AT SURFACE
5/8/2010	15:30 - 16:00	0.50	RDMO	01	E	P		RIG DOWN, RELEASE RIG @ 16:00
	1:00 - 3:00	2.00	DRLPRO	01	C	P		WALK THE RIG FROM THE NBU 920-14M1CS
	3:00 - 4:00	1.00	DRLPRO	14	A	P		NU BOPS, HOOK UP FLOW LINES.
	4:00 - 9:30	5.50	DRLPRO	15	A	P		TEST BLIND RAMS, PIPE RAMS, FLOOR VALVES, CHOKE AND ALL RELATED VALVES TO 250 AND 5000 PSI. TEST HYDRIL TO 250 AND 2500 PSI. TEST CASING TO 1500 PSI FOR 30 MINUTES. SLIP AND CUT 98' DRILL LINE.
	9:30 - 11:00	1.50	DRLPRO	09	A	P		SERVICE RIG.
	11:00 - 11:30	0.50	DRLPRO	07	A	P		MAKE UP Q506F ON 1.75 DEG, .21 RPG MTR, MWD EQUIPMENT AND BHA, TIH
	11:30 - 14:30	3.00	DRLPRO	06	A	P		DRILL THE SHOE TRACK.
	14:30 - 15:30	1.00	DRLPRO	02	F	P		ROTATE/ 21%SLIDE 2740'-3417' (677') 79.65 '/HR. WOB-12-18, SPP 1000-1500, GPM-477, BIT RPM 140, MOTOR RPM-100 , DIF- 250-500, MW-8.4, VIS-29
	15:30 - 0:00	8.50	DRLPRO	02	D	P		ROTATE/ 21%SLIDE 3417'-4118' (701') 51.9 '/HR. WOB-12-18, SPP 1000-1500, GPM-477, BIT RPM 140, MOTOR RPM-100 , DIF- 250-500, MW-8.3, VIS-26
	13:30 - 14:00	0.50	DRLPRO	07	A	P		SERVICE RIG



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 920-14M1BS [BLUE]			Spud Conductor: 3/24/2010				Spud Date: 4/5/2010	
Project: UTAH-UINTAH			Site: NBU 920-14M PAD				Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLING			Start Date: 3/22/2010				End Date: 5/21/2010	
Active Datum: RKB @4,825.01ft (above Mean Sea Leve			UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/10/2010	14:00 - 18:00	4.00	DRLPRO	02	D	P		ROTATE/ 21%SLIDE 4118'-4300' (182') 45.5'/HR. WOB-12-18, SPP 1000-1500, GPM-477, BIT RPM 140, MOTOR RPM-100 , DIF- 250-500, MW-8.8, VIS-29
	18:00 - 19:30	1.50	DRLPRO	02	D	P		SLIDE 4300'- 4308' (8')
	19:30 - 20:00	0.50	DRLPRO	02	D	P		ROTATE 4308'-4320' (12')
	20:00 - 21:00	1.00	DRLPRO	02	D	P		SLIDE 4320'-4332' (12')
	21:00 - 22:30	1.50	DRLPRO	02	D	P		ROTATE 4332'-4438' (6')
	22:30 - 0:00	1.50	DRLPRO	02	D	P		SLIDE 4438'-4447' (9')
	0:00 - 1:00	1.00	DRLPRO	02	D	P		SLIDE 4448'-4457' (9')
	1:00 - 1:30	0.50	DRLPRO	02	D	P		ROTATE 4457'-4481' (24')
	1:30 - 3:00	1.50	DRLPRO	02	D	P		SLIDE 4481'-4489' (8')
	3:00 - 3:30	0.50	DRLPRO	02	D	P		ROTATE 4489'-4527' (38')
	3:30 - 7:30	4.00	DRLPRO	02	D	P		SLIDE 4527'-4555' (28')
	7:30 - 8:00	0.50	DRLPRO	02	D	P		ROTATE 4555'-4567' (12')
	8:00 - 9:00	1.00	DRLPRO	02	D	P		SLIDE 4567'-4576" (9') DURING SLIDE MUDDED UP TO KILL A 12 BPH SALT WATER FLOW. TOOK A 9.8 PPG TO KILL PRIOR TO TRIP. PUMP A SLUG.
	9:00 - 13:00	4.00	DRLPRO	06	A	P		POOH TO PICK UP A 1.5 DEG. MOTOR. LD MOTOR AND CHANGE OUT 1 MONEL COLLAR.
13:00 - 15:00	2.00	DRLPRO	06	A	P		MAKE UP NEW Q506F PDC ON 1.5 DEG. ,23 RPG MOTOR AND BHA. TIH.	
15:00 - 15:30	0.50	DRLPRO	07	A	P		RIG SERVICE	
15:30 - 17:00	1.50	DRLPRO	08	B	Z		CHANGE OUT PECO COMPUTER TO NEW UPGRADE.	
17:00 - 21:00	4.00	DRLPRO	06	A	P		TIH, WASH 120' TO BOTTOM, NO FILL	
21:00 - 0:00	3.00	DRLPRO	02	D	P		ROTATE57% / SLIDE42% 4576'-4671' (95') 31.6'/HR. WOB-12-18, SPP 1350-1800, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-500, MW-9.7, VIS-33	
5/11/2010	0:00 - 15:00	15.00	DRLPRO	02	D	P		ROTATE/ SLIDE 4671'-5201 (530') 35.3'/HR. WOB-12-18, SPP 1350-1800, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-500, MW-9.7, VIS-34
	15:00 - 15:30	0.50	DRLPRO	07	A	P		RIG SERVICE
	15:30 - 0:00	8.50	DRLPRO	02	D	P		ROTATE75%/ SLIDE24% 5201'-5704' (503') 59.1'/HR. WOB-12-22, SPP 1500-1950, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-450, MW-9.7, VIS-36
5/12/2010	0:00 - 11:00	11.00	DRLPRO	02	D	P		DRILL & SLIDE 5704' TO 6200 WOB-12-22, SPP ON/OFF- 2065-1850, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-450, TQE ON/OFF- 18/8, MW-10, VIS-41
	11:00 - 11:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	11:30 - 0:00	12.50	DRLPRO	02	D	P		DRILL & SLIDE 6200 TO 7112 WOB-12-22, SPP ON/OFF- 2065-1850, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-450, TQE ON/OFF- 18/8, MW-10, VIS-41
5/13/2010	0:00 - 16:00	16.00	DRLPRO	02	D	P		DRILL & SLIDE 7112 TO 7559, WOB-12-22, SPP ON/OFF- 2065-1850, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-450, TQE ON/OFF- 18/8, MW-10, VIS-41
	16:00 - 16:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	16:30 - 0:00	7.50	DRLPRO	02	D	P		DRILL & SLIDE 7559 TO 7825 , WOB-16-29, SPP ON/OFF- 2120-1960, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 120-250, TQE ON/OFF- 18/819/9, MW-10.5, VIS-37



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 920-14M1BS [BLUE]			Spud Conductor: 3/24/2010				Spud Date: 4/5/2010	
Project: UTAH-UINTAH			Site: NBU 920-14M PAD				Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLING			Start Date: 3/22/2010				End Date: 5/21/2010	
Active Datum: RKB @4,825.01ft (above Mean Sea Leve			UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/14/2010	0:00 - 15:30	15.50	DRLPRO	02	D	P		DRILL & SLIDE 7824 TO 8284 , WOB-16-29, SPP ON/OFF- 2120-1960, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 120-250, TQE ON/OFF- 18/819/9, MW-10.5, VIS-37
	15:30 - 16:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRILL & SLIDE 8284 TO 8510 , WOB-16-29, SPP ON/OFF- 2650-2480, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 120-350, TQE ON/OFF- 18/819/9, MW-11.5, VIS-41
5/15/2010	0:00 - 15:00	15.00	DRLPRO	02	D	P		DRILL & SLIDE 8510 TO 9009, WOB-16-29, SPP ON/OFF- 2650-2480, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 120-350, TQE ON/OFF- 18/819/9, MW-11.5, VIS-41, LCM-5%, STARTED LOSING MUD, LOST 50 BBLS
	15:00 - 15:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	15:30 - 0:00	8.50	DRLPRO	02	D	P		DRILL & SLIDE 9009 TO 9219, WOB-16-29, SPP ON/OFF- 2650-2480, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 120-300, TQE ON/OFF- 18/819/9, MW-12.2, VIS-43, LCM-5%, PUT ON GAS BUSTER, 10-15 FT FLARE AT 9180
5/16/2010	0:00 - 13:30	13.50	DRLPRO	02	D	P		DRILL & SLIDE 9219 TO 9552 , WOB-16-29, SPP ON/OFF- 2650-2480, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 120-300, TQE ON/OFF- 18/819/9, MW IN/OUT-12.5/12.2, VIS-43, LCM-7%, 5-10 FT FLARE ON CONNECTIONS, RAISE MUD WT TO 12.8 PRIOR TO TRIP
	13:30 - 14:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	14:00 - 15:30	1.50	DRLPRO	05	C	P		CIRC HOLE CLEAN, PUMP PILL
	15:30 - 22:30	7.00	DRLPRO	06	A	P		TRIP FOR BIT, LD MOTOR & BIT
	22:30 - 0:00	1.50	DRLPRO	06	A	P		PU NEW BIT & MOTOR, ORIENT TOOLS, TIH
5/17/2010	0:00 - 1:30	1.50	DRLPRO	06	A	P		TIH W/ BHA#3
	1:30 - 2:00	0.50	DRLPRO	08	A	Z		REPLACED BOLT OUT OF PIPE GATE
	2:00 - 8:00	6.00	DRLPRO	06	A	P		TIH W/ BHA#3
	8:00 - 11:00	3.00	DRLPRO	02	D	P		DRILL & SLIDE 9552 TO 9646 , WOB-16-29, SPP ON/OFF- 2695-2540, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-350, TQE ON/OFF- 18/819/9, MW IN/OUT-12.812.7, VIS-46, LCM-10%, 15 FT FLARE TRIP GAS, 5-10 FT FLARE CONNECTIN GAS
	11:00 - 11:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
5/18/2010	11:30 - 0:00	12.50	DRLPRO	02	D	P		DRILL & SLIDE 9646 TO 9966, WOB-16-29, SPP ON/OFF- 22909-2780, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-350, TQE ON/OFF- 23/12, MW IN/OUT-12.812.7, VIS-46, LCM-10%, 5-10 FT FLARE CONNECTION GAS
	0:00 - 5:00	5.00		02	D	P		DRILL & SLIDE 9966 TO 10050, WOB-16-29, SPP ON/OFF- 2909-2780, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-350, TQE ON/OFF- 23/16, MW IN/OUT-12.812.7, VIS-46, LCM-10%, 5-10 FT FLARE CONNECTION GAS
	5:00 - 5:30	0.50	DRLPRO	10	D	Z		TROUBLE SHOOT MWD TOOLS, CAN'T GET SIGNALS, PROJECTION TO TD 4' EAST-25' NORTH OF CENTER
	5:30 - 10:30	5.00	DRLPRO	02	D	P		DRILL & SLIDE 10050 TO 10190, WOB-16-29, SPP ON/OFF- 2909-2780, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-350, TQE ON/OFF- 23/16, MW IN/OUT-12.8/12.7, VIS-46, LCM-10%, LUBRICATE RIG
	10:30 - 11:00	0.50	DRLPRO	07	A	P		



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 920-14M1BS [BLUE]			Spud Conductor: 3/24/2010			Spud Date: 4/5/2010		
Project: UTAH-UINTAH			Site: NBU 920-14M PAD			Rig Name No: PROPETRO/, ENSIGN 145/145		
Event: DRILLING			Start Date: 3/22/2010			End Date: 5/21/2010		
Active Datum: RKB @4,825.01ft (above Mean Sea Leve			UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
5/19/2010	11:00 - 0:00	13.00	DRLPRO	02	D	P		DRILL & SLIDE 10190 TO 10470, WOB-16-29, SPP ON/OFF- 2909-2780, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-350, TQE ON/OFF- 23/18, MW IN/OUT-12.8/12.7, VIS-46, LCM-10%
	0:00 - 17:00	17.00	DRLPRO	02	D	P		DRILL & SLIDE 10470 TO 10834,TD AT 17:00 WOB-16-29, SPP ON/OFF- 2909-2780, GPM-477, BIT RPM 149, MOTOR RPM-109 , DIF- 250-350, TQE ON/OFF- 24/18, MW IN/OUT-12.8/12.7, VIS-46, LCM-10%
	17:00 - 18:00	1.00	DRLPRO	05	F	P		PUMP SWEEP, CIRC HOLE
	18:00 - 0:00	6.00	DRLPRO	06	A	P		POOH & LD DP SINGLES, PUMP & ROTATE OUT 40 STANDS, DP
5/20/2010	0:00 - 13:00	13.00	DRLPRO	06	A	P		POOH & LD DP SINGLES, TIH 40 STDS, LD DP SINGLES
	13:00 - 14:30	1.50	DRLPRO	06	A	P		LD DIR TOOLS, MOTOR & BIT
	14:30 - 15:00	0.50	DRLPRO	06	A	P		PULL WEAR BUSHING
	15:00 - 21:00	6.00	DRLPRO	12	A	P		HOLD SAFETY MEETING, RU CASERS, RUN 30 JTS 4 1/2, 11.6#, P-110, 97 JTS I-80,4 1/2, 11.6 CSG, STOPPED TO FILL PIPE, PIPE STUCK WITH SHOE AT 5240.
5/21/2010	21:00 - 0:00	3.00	DRLPRO	22	A	X		WORKED PIPE 30K TO 170K, PUMP 210 BBLS FRESH WATER AROUND BACKSIDE, WORK PIPE 30K TO 170K, PIPE STILL STUCK, STRETCH CALCULATION INDICATES 3710' OF FREE PIPE
	0:00 - 10:00	10.00	DRLPRO	22	A	X		WORK STUCK PIPE, CHANGE OUT TO HYC ELEVATORS, DISPLACE HOLE WITH FREA H WATER, PULL 190K, PIPE CAME FREE, ROLL HOLE WITH MUD,
	10:00 - 15:00	5.00	DRLPRO	12	C	P		RUN-129 JTS 4 1/2, 11.6, I-80 BTC CSG, SHOE LANDED AT 10828, LAST 2000 FT TIH UNDER A 15 FT FLARE, HAVE NOT BEEN ABLE TO PULL OUT OF HOLE SINCE 8300 FT. CALL OUT CONTINGENCY SLIPS, WILL HAVE TO SET SLIPS & CUT OFF CSG.
	15:00 - 17:00	2.00	DRLPRO	05	A	P		CIRCULATE GAS OUT OF HOLE FROM PUMPING WATER TO BREAK DIFFERENTIAL STICKING. 30-50 FT FLARE FOR 45 MINUTES
	17:00 - 18:00	1.00	DRLPRO	12	A	P		HOLD SAFETY MEETING, RU CEMENTERS
	18:00 - 20:00	2.00	DRLPRO	12	E	P		PUMP 40 BBLS SPACER, 246 BBLS 764 SX, 12.9# LEAD, 281 BBLS, 1205 SX 14.3# TAIL, DISPLACE WITH 168 BBLS WATER, BUMP PLUG, FLOATS HELD, RETURNED 1 BBL CMT TO SURFACE.



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 920-14M1BS [BLUE]	Spud Conductor: 3/24/2010	Spud Date: 4/5/2010
Project: UTAH-UINTAH	Site: NBU 920-14M PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 3/22/2010	End Date: 5/21/2010
Active Datum: RKB @4,825.01ft (above Mean Sea Leve UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	20:00 - 20:00	0.00	DRLPRO					<p>CONDUCTOR CASING: Cond. Depth set: Cement sx used:</p> <p>SPUD DATE/TIME: 4/5/2010 7:30</p> <p>SURFACE HOLE: 11 Surface From depth:40 Surface To depth: 2,740 Total SURFACE hours: 38.00 Surface Casing size:9 5/8 # of casing joints ran: 62 Casing set MD:2,702.0 # sx of cement:610 Cement blend (ppg):LEAD-11.0, TAIL-15.8, TOP OUT-15.8 Cement yield (ft3/sk): LEAD-3.82, TAIL-1.15, TOP OUT-1.15 # of bbls to surface: 20 Describe cement issues: Describe hole issues:</p> <p>PRODUCTION: 7.875 Rig Move/Skid start date/time: 5/8/2010 1:00 Rig Move/Skid finish date/time:5/8/2010 3:00 Total MOVE hours: 2.0 Prod Rig Spud date/time: 5/8/2010 14:30 Rig Release date/time: 5/21/2010 23:59 Total SPUD to RR hours:321.5 Planned depth MD 10,834 Planned depth TVD 10,748 Actual MD: 10,834 Actual TVD: 10,744 Open Wells \$: \$983,933 AFE \$: \$967,211 Open wells \$/ft:\$90.82</p> <p>PRODUCTION HOLE: 7.875" Prod. From depth: 2,740 Prod. To depth:10,834 Total PROD hours: 236.5 Log Depth: NO RUN Production Casing size: 4 1/2 # of casing joints ran: 256 Casing set MD:10,828.0 # sx of cement:LEAD 764, TAIL 1205 Cement blend (ppg):LEAD 12.9, TAIL 14.3 Cement yield (ft3/sk): LEAD 1.81, TAIL 1.31 Est. TOC (Lead &amp; Tail) or 2 Stage : LEAD "13", TAIL 5700' Describe cement issues: NONE Describe hole issues: NONE</p> <p>DIRECTIONAL INFO: KOP: 2,889 Max angle: 16.59 Departure: 730.32 Max dogleg MD: 3.26 ND BOP, SET SLIPS IN 127K TENSION, CUT OFF CSG, CLEAN PITS, RELEASE RIG AT 23:59.</p>
	20:00 - 0:00	4.00	DRLPRO	01	E	P		



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 920-14M1BS [BLUE]			Spud Conductor: 3/24/2010				Spud Date: 4/5/2010	
Project: UTAH-UINTAH			Site: NBU 920-14M PAD				Rig Name No: SWABBCO 1/1	
Event: COMPLETION			Start Date: 6/15/2010				End Date: 7/1/2010	
Active Datum: RKB @4,825.01ft (above Mean Sea Leve			UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
6/18/2010	7:00 - 7:15	0.25	COMP	48		P		HSM, P/T CSG & FRAC VALVES / R/U WIRE LINE
	7:15 - 13:00	5.75	COMP	37	B	P		MIRU B&C TESTERS, P/T CSG & FRAC VALVES TO 7000# [GOOD TEST] R/D TESTERS, MIRU CUTTERS WIRE LINE, P/U RIH W/ PERF GUN PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM 0.36" HOLE 10648'-10654' 4 SPF, 90* PH, 24 HOLES. 10442'-10444' 4 SPF, 90* PH, 8 HOLES. 10414'-10416' 4 SPF, 90* PH, 8 HOLES [40 HOLES] SWI.
6/21/2010	7:00 - 14:30	7.50	COMP	36	E	P		MIRU SUPERIOR WELL SERVICE FRAC CREW, PRESSURE TEST SURFACE LINE TO 8500#,
	14:30 - 17:00	2.50	COMP	36	E	P		( STG #1 ) WHP = 1750 #, BRK DN PERF @ 3518 # @ 4.6 B/M, INJ- RT = 45.7 B/M, INJ-P = 6500 #, ISIP = 2945 #, F.G.= 0.72 , CALC 70% PERF OPEN, PUMP 1424 BBLS WTR & 47231# OTTAWA SAND, ISIP = 3294 #, F.G.= 0.75 , NPI = 349 #, MP = 6705 #, MR = 49 B/M, AP = 6004 # AR = 45.7 B/M, 42231 # 30/50 SAND, 5000 # TLC SAND, COMMENTS = PUMP AND PRESSURE VESSEL TROUBLE  ( STG #2 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 10260 ' , PERF THE MESAVERDE @ 10224' - 10230' 4-spf, 10186' - 10190' 3-spf , USING 3 3/8" SCALLOP GUNS, 23 gm, 0.36 HOLE, 90* PHS, 40 HOLES,



US ROCKIES REGION  
Operation Summary Report

Well: NBU 920-14M1BS [BLUE]			Spud Conductor: 3/24/2010			Spud Date: 4/5/2010		
Project: UTAH-UINTAH			Site: NBU 920-14M PAD			Rig Name No: SWABBCO 1/1		
Event: COMPLETION			Start Date: 6/15/2010			End Date: 7/1/2010		
Active Datum: RKB @4,825.01ft (above Mean Sea Leve			UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
6/22/2010	7:00 - 20:00	13.00	COMP	36	E	P		( STG #2 ) WHP = 2020 #, BRK DN PERF @ 3281 # @ 4.7 B/M, INJ- RT = 48 B/M, INJ-P = 5823 #, ISIP = 2853 #, F.G.= 0.72 , CALC 68% PERF OPEN, PUMP 2062 BBLS WTR & 77108 # OTTAWA SAND, ISIP = 3819 #, F.G.= 0.81, NPI = 966 #, MP = 7516 #, MR = 49.3 B/M, AP = 6131 #, AR = 48.8 B/M, 72108 # 30/50 SAND, 5000 # TLC SAND, COMMENTS = SCREEN OUT ON FLUSH, - 118 BBLS ON FLUSH, FLOW WELL BACK, REFLUSH,  ( STG #3 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 10126', PERF THE MESAVERDE @ 10092' - 10096' 4-SPF, 10078 - 10080' 3- SPF, 10018' - 10020' 3-SPF, 9990' - 9994' 3-SPF, USING 3 3/8" SCALLOP GUNS, 23 gm, 0.36 HOLE, 90° PHS, 40 HOLES, WHP = 2950 #, BRK DN PERF @ 3954 # @ 4.7 B/M, INJ- RT = 42 B/M, INJ-P = 6200 #, ISIP = 3391 #, F.G.= 0.78 , CALC 66% PERF OPEN, PUMP 1331 BBLS WTR & 42704 # OTTAWA SAND, ISIP = 3605 #, F.G.= 0.80 , NPI = 2140 #, MP = 7068 #, MR = 47.5 B/M AP = 6142 #, AR = 45.6 B/M, 37704 # 30/50 SAND, 5000 # TLC SAND, COMMENTS = SCREEN OUT ON FLUSH, 110 BBLS SHORT, FLOW WELL BACK, REFLUSH  ( STG #4 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 9918' , PERF THE MESAVERDE @ 9882' - 9888' 3-SPF, 9772' - 9776' 3-SPF, 9714' - 9718' 2-SPF, USING 3 3/8" SCALLOP GUNS, 23 gm, 0.36 HOLE, 90° PHS, 40 HOLES, WHP = 1232 #, BRK DN PERF @ 4631 # @ 4.7 B/M, INJ- RT = 49.3 B/M, INJ-P = 6200 #, ISIP = 3301 #, F.G.= 0.77 , CALC 97% PERF OPEN, PUMP 1066 BBLS WTR & 38625 # OTTAWA SAND, ISIP = 3334 #, F.G.= 0.78 , NPI = 33 #, MP = 6632 #, MR = 49.6 B/M, AF = 6196 #, AR = 48.1 B/M, 35625 # 30/50 SAND, 3000 # TLC SAND, COMMENTS = GOOD JOB, CUT TLC SAND BY 2000#,  ( STG #5 ) RIH W/ HALLIBURTON 8K CBP AND PERF GUNS, SET CBP @ 9666' , PERF THE MESAVERDE @ 9632' - 9636' 4-SPF, WIRELINE GOT HUNG UP IN GREASE HEAD, PULLED WIRE LINE OUT , SWE SDFN  ( STG #5 ) RIH W/ PERF GUNS SET DN @ 9570', POSSIBLE SAND, POOH, TRY PUMP INTO WELL W/ PRESSURE UP TO 6850#, OPEN WELL UP FLOW TO PIT FOR 4 HOURS W/ VERRY LITTLE FLOW, TRY PUMP INTO WELL W/ PRESSURE UP TO 6850 #, BLEED OFF SHUT WELL IN R/D. HSM, STAY AWAY F/ SAND LINE WHILE SAND LINE IS MOVING MIRU DELSCO SWAB UNIT. SICP 500#. BLEED OFF PSI T/ PIT. BLED RIGHT DOWN. PU 3 1/2 SAND LINE BAILER. RIH TAG @ 9569' +/-. MAKE 10 RUNS. STOP MAKING HOLE @ 9620' +/- TOTAL HOLE MADE = 51' +/-. SWI. RDMO SWAB RIG.
6/23/2010	7:00 - 17:00	10.00	COMP	36	E	P		
6/24/2010	10:00 - 10:15	0.25	COMP	48		P		
	10:15 - 18:30	8.25	COMP	42	A	P		



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 920-14M1BS [BLUE]			Spud Conductor: 3/24/2010			Spud Date: 4/5/2010		
Project: UTAH-UINTAH			Site: NBU 920-14M PAD				Rig Name No: SWABBCO 1/1	
Event: COMPLETION			Start Date: 6/15/2010				End Date: 7/1/2010	
Active Datum: RKB @4,825.01ft (above Mean Sea Leve			UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
6/25/2010	7:00 - 7:15	0.25	COMP	48		P		HSM. SIM OPES



US ROCKIES REGION  
Operation Summary Report

Well: NBU 920-14M1BS [BLUE]	Spud Conductor: 3/24/2010	Spud Date: 4/5/2010
Project: UTAH-UINTAH	Site: NBU 920-14M PAD	Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 6/15/2010	End Date: 7/1/2010
Active Datum: RKB @4,825.01ft (above Mean Sea Leve UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 18:00	10.75	COMP	36	B	P		<p>MIRU CUTTERS WL. SUPERIOR FRAC WAS ALREADY RU.</p> <p>PERF STG 5) PU 3 1/8 EXP GUN 23 GM, .36 HOLE SIZE, 120 DEG PHASING. RIH TAG @ 9630'. BTM INTERVAL IS COVERD W/ SAND. P/U PERF F/ 9584'-88', 3 SPF, 12 HOLES.</p> <p>9522'-24', 3 SPF, 6 HOLES.</p> <p>POOH. PU 3 1/8 EXP GUN 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF F/ 9630'-26', 4 SPF, 16 HOLES.</p> <p>POOH. TOTAL HOLES = 50.</p> <p>16 HOLE F/ 9632'-36' ARE COVERED W/ SAND.</p> <p>FRAC STG 5)WHP 2260 PSI, BRK 3933 PSI @ 4.4 BPM. ISIP 2768 PSI, FG .73.</p> <p>PUMP 100 BBLS @ 44.2 BPM @ 5540 PSI = 100% HOLES OPEN.</p> <p>ISIP 3277 PSI, FG .78, NPI 509 PSI.</p> <p>MP 6361 PSI, MR 51.6 BPM, AP 5681 PSI, AR 48 BPM,</p> <p>PMP 1096 BBLS SW &amp; 34,311 LBS OF 30/50 SND &amp; 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 39,311 LBS,</p> <p>SWI, X-OVER FOR WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 9372' P/U PERF F/ 9148'-54', 3 SPF, 18 HOLES.</p> <p>9338'-42', 4 SPF, 16 HOLES.</p> <p>POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 6)WHP 1571 PSI, BRK 3034 PSI @ 4.4 BPM. ISIP 2244 PSI, FG .68.</p> <p>PUMP 100 BBLS @ 48.6 BPM @ 5595 PSI = 85% HOLES OPEN.</p> <p>ISIP 3115 PSI, FG .78, NPI 871 PSI.</p> <p>MP 6081 PSI, MR 52 BPM, AP 5711 PSI, AR 50.6 BPM,</p> <p>PMP 964 BBLS SW &amp; 26,938 LBS OF 30/50 SND &amp; 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 31,938 LBS,</p> <p>THIS STG WAS 5,000# SHORT ON WHITE SAND.</p> <p>SWI. X-OVER FOR WL.</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN. 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8812' P/U PERF F/ 8722'-26', 4 SPF, 16 HOLES.</p> <p>8776'-82', 4 SPF, 24 HOLES.</p> <p>POOH. X-OVER FOR FRAC CREW.</p> <p>FRAC STG 7)WHP 591 PSI, BRK 4350 PSI @ 4.7 BPM. ISIP 2885 PSI, FG .78.</p> <p>PUMP 100 BBLS @ 50 BPM @ 5586 PSI = 90% HOLES OPEN.</p> <p>ISIP 3236 PSI, FG .81, NPI 350 PSI.</p> <p>MP 6536 PSI, MR 51.1 BPM, AP 5558 PSI, AR 50 BPM,</p> <p>PMP 1290 BBLS SW &amp; 44,543 LBS OF 30/50 SND &amp; 5,000 LBS OF 20/40 SLC SND. TOTAL PROP 49,543 LBS,</p> <p>SWI. X-OVER FOR WL.</p> <p>KILL PLUG- PU 4 1/2 8K HAL CBP. RIH SET CBP @</p>



US ROCKIES REGION  
Operation Summary Report

Well: NBU 920-14M1BS [BLUE]			Spud Conductor: 3/24/2010			Spud Date: 4/5/2010		
Project: UTAH-UINTAH			Site: NBU 920-14M PAD			Rig Name No: SWABBCO 1/1		
Event: COMPLETION			Start Date: 6/15/2010			End Date: 7/1/2010		
Active Datum: RKB @4,825.01ft (above Mean Sea Leve			UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
6/30/2010	7:00 - 7:15	0.25	COMP	48		P		8650'. POOH RDMO CUTTERS WL & SUPERIOR FRAC SERV.  TOTAL SAND PUMPED = 326,460# TOTAL FLUID PUMPED = 9233 BBLS  TOTAL SCALE INHIB = 957 GAL TOTAL BIO = 167 GAL JSA = TALLEY PIPE RU RIG 0 PSI ON WELL ND FRAC VALVES NU BOPS, RU FLOOR & TUBING EQUIP, PU 3-7/8 SEALED BIT POBS & 1.87 XN NPL TALLEY & PU TUBING RIH W/ 274 JNTS TAG KILL PLUG @ 8646' RU DRILLING HEAD & PWR SWVL.  PLUG #1] DRILL THRU HALLI 8K CBP @ 8672' IN 21 MIN W/ 100# INCREASE  PLUG #2] CONTINUE TO RIH TAG SAND @ 88782' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 8812' IN 12 MIN W/ 150# INCREASE ( 400# ON WELL)  PLUG #3] CONTINUE TO RIH TAG SAND @9342' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 9372' IN 19 MIN W/ 200# INCREASE (350# ON WELL)  CIRC CLEAN 20 MIN RD PWR SWVL POOH 22 JNT, EOT @ 8682' (TOP PERF @ 8722') SWIFN. CONTINUE DRILLING PLUGS IN AM JSA=
	7:15 - 17:00	9.75	COMP	30		P		
7/1/2010	7:00 - 7:15	0.25	COMP	48		P		



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 920-14M1BS [BLUE]	Spud Conductor: 3/24/2010	Spud Date: 4/5/2010
Project: UTAH-UINTAH	Site: NBU 920-14M PAD	Rig Name No: SWABBCO 1/1
Event: COMPLETION	Start Date: 6/15/2010	End Date: 7/1/2010
Active Datum: RKB @4,825.01ft (above Mean Sea Leve UWI: SW/SW/0/9/S/20/E/14/0/0/6/PM/S/468.00/W/0/637.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 7:15	0.00	COMP	30		P		SIWP= 2200 PSI OPEN WELL TO PIT EOT@ 8682' RIH TAG SAND @ 9636' RU PWR SWVL EST CIRC.  PLUG #4] TAG SAND @ 9636' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 9666' IN 12 MIN W/ 0# INCREASE ( LOST CIRC FOR WHILE CIRC ADD 30 MIN TO ENSURE WELL CLEAN)  PLUG #5] CONTINUE TO RIH TAG SAND @9888' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 9918' IN 14 MIN W/ 150# INCREASE  PLUG #6] CONTINUE TO RIH TAG SAND @ 10096' (30' FILL) C/O & DRILL THRU HALLI 8K CBP @ 10126' IN 17 MIN W/ 50# INCREASE  PLUG #7] CONTINUE TO RIH TAG SAND @ 10225' (35' FILL) C/O & DRILL THRU HALLI 8K CBP @ 10260' IN 17 MIN W/ 150# INCREASE 750# ON WELL  CONTINUE TO RIH TAG SAND @ 10706' (120' FILL) C/O TO PBTD @ 10826' CIRC CLEAN RD PWR SWVL POOH LD 21 JNTS LAND TUBING ON HANGER W/ 321 JNTS OF 2-3/8" L-80 TUBING ( SENT 27 JNTS BACK ON FLOAT) RD FLOOR & TUBING EQUIP, ND BOPS NU WELL HEAD DROP BALL, PUMP OFF BIT @ 2200 PSI LEAVE WELL SHUT IN 30 MIN TO ALLOW BIT TO FALL, TURN WELL OVER TO FBC @ 14:00 , RD RID MOVE TO RED WELL.  TOTAL FLUID PUMPED= 5797 BBLS RIG REC = 2100 BBLS LEFT TO REC= 3697 BBLS  KB= 13.00 HANGER= 1.00 321 JNTS 2-3/8" L-80= 10137.70 POBS= 2.20 EOT= 10153.90  7/2/2010 7:00 - PROD 33 A 7 AM FLBK REPORT: CP 3300#, TP 2350#, 20/64" CK, 45 BWPH, 1/2C. SAND, - GAS TTL BBLS RECOVERED: 3295 BBLS LEFT TO RECOVER: 2502 WELL TURNED TO SALES @ 1115 HR ON 7/2/2010 - 1600 MCFD, 960 BWPD, CP 3400#, FTP 2350#, CK 16/64"  7/3/2010 7:00 - 33 A 7 AM FLBK REPORT: CP 3500#, TP 2500#, 16/64" CK, 35 BWPH, 1/4C SAND, - GAS TTL BBLS RECOVERED: 4235 BBLS LEFT TO RECOVER: 1562  7/4/2010 7:00 - 33 A 7 AM FLBK REPORT: CP 3300#, TP 2400#, 16/64" CK, 30 BWPH, TBS SAND, - GAS TTL BBLS RECOVERED: 4935 BBLS LEFT TO RECOVER: 862  7/5/2010 7:00 - 33 A 7 AM FLBK REPORT: CP 3000#, TP 2250#, 16/64" CK, 20 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 5435 BBLS LEFT TO RECOVER: 362  7:00 - WELL IP'D ON 7/5/10 - 2177 MCFD, 0 BOPD, 480 BWPD, CP 3000#, FTP 2250#, CK 16/64", LP 91#, 24 HRS

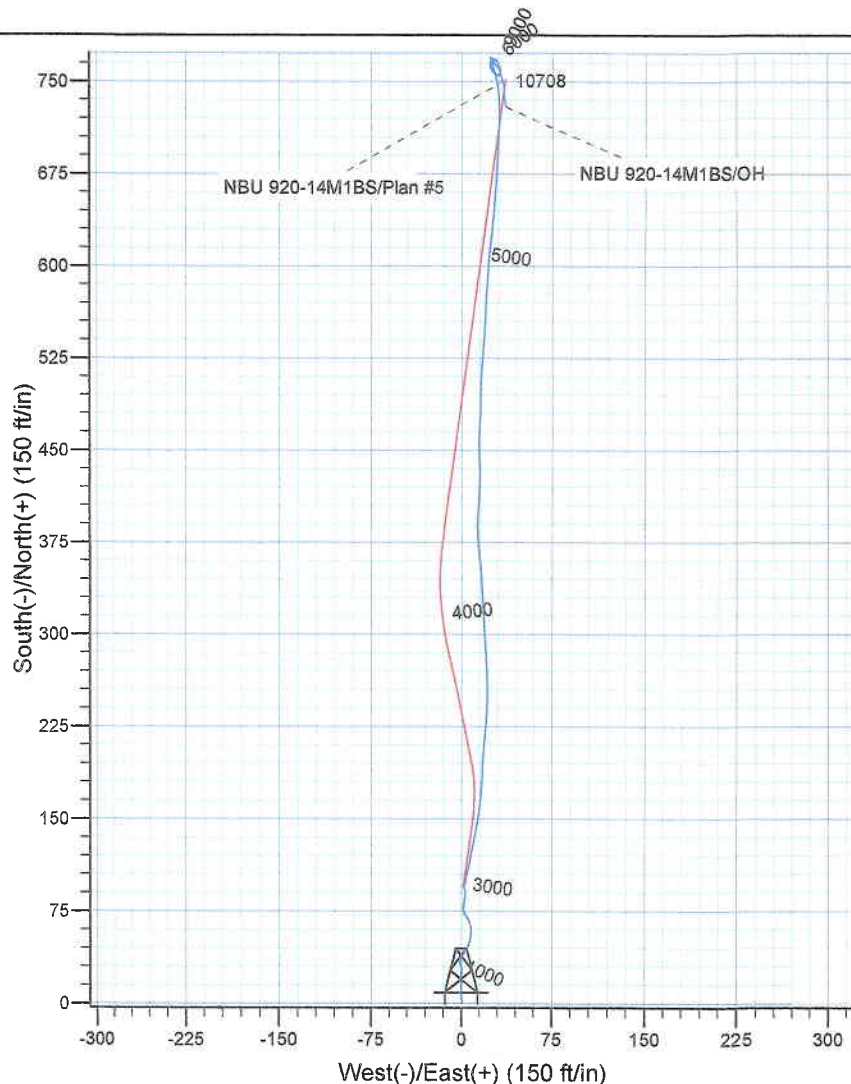
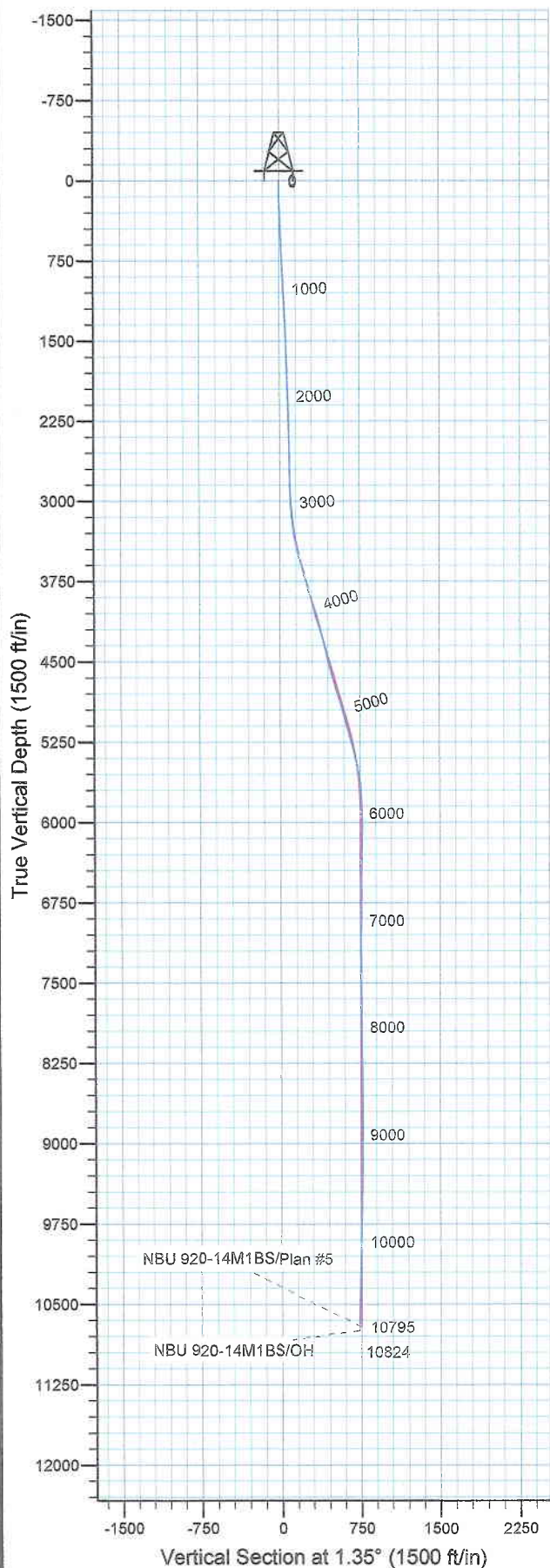




**Scientific Drilling**  
Rocky Mountain Operations

Project: Uintah County, UT UTM12  
Site: NBU 920-14M Pad  
Well: NBU 920-14M1BS  
Wellbore: OH  
Design: OH

Kerr McGee Oil and Gas Onshore LP



#### WELL DETAILS: NBU 920-14M1BS

Ground Level: 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
+N/-S +E/-W    Northing    Easting    Latitude    Longitude  
0.00    0.00 14539651.17    2020965.29    40° 1' 45.814 N    109° 38' 26.232 W

#### REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well NBU 920-14M1BS, True North  
Vertical (TVD) Reference: GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
Section (VS) Reference: Slot - (0.00N, 0.00E)  
Measured Depth Reference: GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
Calculation Method: Minimum Curvature  
Local North: True  
Location: Sec 14 T9S R20E

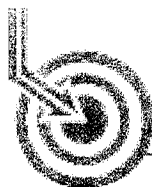
#### PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
Datum: NAD 1927 - Western US  
Ellipsoid: Clarke 1866  
Zone: Zone 12N (114 W to 108 W)

Design: OH (NBU 920-14M1BS/OH)

Created By: Rex Hall    Date: 2010-06-30





**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12  
NBU 920-14M Pad  
NBU 920-14M1BS  
OH

Design: OH

## **Standard Survey Report**

30 June, 2010





**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 920-14M Pad  
**Well:** NBU 920-14M1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 920-14M1BS  
**TVD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**MD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 920-14M Pad, Sec 14 T9S R20E				
<b>Site Position:</b>		<b>Northing:</b>	14,539,718.00 ft	<b>Latitude:</b>	40° 1' 46.478 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,020,941.95 ft	<b>Longitude:</b>	109° 38' 26.519 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	0.87 °

Well	NBU 920-14M1BS, 468' FSL & 637' FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,539,651.17 ft	Latitude:	40° 1' 45.814 N
	+E/-W	0.00 ft	Easting:	2,020,965.29 ft	Longitude:	109° 38' 26.232 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,812.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2005-10	2009/12/31	11.31	65.91	52,502

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	10.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	10.00	0.00	0.00	1.35	

<b>Survey Program</b>	<b>Date</b>	2010/06/30			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
143.00	2,693.00	Survey #1 - Surface MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	
2,799.00	10,834.00	Survey #2 - Production MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
143.00	0.21	15.20	143.00	0.24	0.06	0.24	0.16	0.16	0.00
<b>First SDI Surface MWD Survey</b>									
233.00	1.27	358.87	232.99	1.39	0.09	1.39	1.19	1.18	-18.14
323.00	2.10	356.44	322.95	4.03	-0.03	4.03	0.93	0.92	-2.70
413.00	3.04	356.98	412.86	8.06	-0.26	8.06	1.04	1.04	0.60
503.00	2.56	357.71	502.75	12.46	-0.47	12.44	0.53	-0.53	0.81
593.00	2.84	1.45	592.65	16.69	-0.49	16.68	0.37	0.31	4.16
683.00	3.33	5.48	682.52	21.52	-0.19	21.51	0.60	0.54	4.48
773.00	3.01	1.64	772.38	26.49	0.13	26.48	0.43	-0.36	-4.27
863.00	2.46	330.50	862.29	30.53	-0.75	30.50	1.73	-0.61	-34.60
953.00	2.32	9.48	952.21	34.01	-1.40	33.97	1.78	-0.16	43.31



Company: Kerr McGee Oil and Gas Onshore LP  
Project: Uintah County, UT UTM12  
Site: NBU 920-14M Pad  
Well: NBU 920-14M1BS  
Wellbore: OH  
Design: OH

Local Co-ordinate Reference: Well NBU 920-14M1BS  
TVD Reference: GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
MD Reference: GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
North Reference: True  
Survey Calculation Method: Minimum Curvature  
Database: EDM 2003.16 Multi-User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,043.00	3.22	30.75	1,042.11	37.98	0.19	37.97	1.50	1.00	23.63
1,133.00	3.63	33.31	1,131.95	42.53	3.05	42.59	0.49	0.46	2.84
1,223.00	3.30	21.43	1,221.79	47.32	5.56	47.44	0.88	-0.37	-13.20
1,313.00	2.98	12.92	1,311.65	52.02	7.03	52.17	0.63	-0.36	-9.46
1,403.00	2.55	5.34	1,401.55	56.29	7.74	56.46	0.63	-0.48	-8.42
1,493.00	2.18	355.33	1,491.47	59.99	7.78	60.15	0.61	-0.41	-11.12
1,583.00	2.33	345.90	1,581.40	63.47	7.20	63.62	0.44	0.17	-10.48
1,673.00	1.68	343.23	1,671.34	66.51	6.37	66.64	0.73	-0.72	-2.97
1,763.00	1.69	328.22	1,761.31	68.90	5.29	69.00	0.49	0.01	-16.68
1,853.00	1.79	318.38	1,851.26	71.08	3.66	71.14	0.35	0.11	-10.93
1,943.00	1.79	336.23	1,941.22	73.41	2.16	73.44	0.62	0.00	19.83
2,033.00	2.07	357.41	2,031.17	76.32	1.52	76.34	0.85	0.31	23.53
2,123.00	2.06	6.31	2,121.11	79.56	1.62	79.57	0.36	-0.01	9.89
2,213.00	1.75	12.47	2,211.06	82.51	2.10	82.53	0.41	-0.34	6.84
2,303.00	1.60	1.35	2,301.03	85.10	2.42	85.14	0.40	-0.17	-12.36
2,393.00	1.19	12.00	2,391.00	87.27	2.65	87.31	0.54	-0.46	11.83
2,483.00	1.19	359.85	2,480.98	89.12	2.84	89.16	0.28	0.00	-13.50
2,573.00	1.42	351.81	2,570.96	91.16	2.68	91.20	0.33	0.26	-8.93
2,663.00	1.11	348.14	2,660.93	93.12	2.34	93.15	0.36	-0.34	-4.08
2,693.00	0.71	334.81	2,690.93	93.57	2.20	93.60	1.50	-1.33	-44.43
<b>Last SDI Surface MWD Survey</b>									
2,799.00	0.53	305.02	2,796.92	94.45	1.52	94.46	0.34	-0.17	-28.10
<b>First SDI Production MWD Survey</b>									
2,889.00	2.20	36.07	2,886.90	96.08	2.20	96.11	2.52	1.86	101.17
2,980.00	2.11	3.47	2,977.84	99.17	3.33	99.22	1.33	-0.10	-35.82
3,071.00	4.13	12.25	3,068.70	104.04	4.12	104.11	2.27	2.22	9.65
3,161.00	6.16	12.08	3,158.33	111.93	5.82	112.04	2.26	2.26	-0.19
3,252.00	8.09	11.46	3,248.63	122.98	8.12	123.14	2.12	2.12	-0.68
3,342.00	10.38	12.08	3,337.45	137.12	11.07	137.34	2.55	2.54	0.69
3,433.00	13.28	8.48	3,426.51	155.48	14.33	155.77	3.29	3.19	-3.96
3,524.00	14.25	2.59	3,514.90	177.00	16.38	177.34	1.87	1.07	-6.47
3,611.00	16.71	4.08	3,598.74	200.18	17.75	200.54	2.86	2.83	1.71
3,702.00	16.18	4.96	3,686.02	225.86	19.78	226.26	0.64	-0.58	0.97
3,792.00	15.83	0.83	3,772.53	250.63	21.04	251.05	1.32	-0.39	-4.59
3,883.00	17.76	355.73	3,859.65	276.88	20.19	277.28	2.67	2.12	-5.60
3,974.00	18.20	356.79	3,946.21	304.91	18.36	305.26	0.60	0.48	1.16
4,064.00	18.11	357.40	4,031.73	332.92	16.94	333.22	0.23	-0.10	0.68
4,155.00	15.56	353.62	4,118.82	359.18	14.94	359.43	3.05	-2.80	-4.15
4,245.00	13.37	357.66	4,205.97	381.58	13.17	381.78	2.68	-2.43	4.49
4,336.00	14.95	4.26	4,294.20	403.80	13.61	404.01	2.48	1.74	7.25
4,427.00	12.66	0.92	4,382.57	425.48	14.64	425.71	2.66	-2.52	-3.67
4,517.00	13.45	357.40	4,470.25	445.80	14.33	446.01	1.25	0.88	-3.91
4,608.00	15.92	3.20	4,558.27	468.83	14.55	469.05	3.16	2.71	6.37
4,699.00	14.95	0.48	4,645.99	493.03	15.34	493.26	1.33	-1.07	-2.99
4,789.00	16.09	4.34	4,732.71	517.08	16.38	517.32	1.71	1.27	4.29
4,880.00	18.11	3.64	4,819.68	543.77	18.23	544.05	2.23	2.22	-0.77
4,970.00	16.88	3.20	4,905.52	570.78	19.85	571.09	1.37	-1.37	-0.49
5,061.00	16.97	3.47	4,992.57	597.23	21.39	597.56	0.13	0.10	0.30
5,152.00	15.04	8.56	5,080.05	622.16	23.95	622.55	2.62	-2.12	5.59
5,242.00	16.97	4.61	5,166.56	646.80	26.75	647.25	2.46	2.14	-4.39
5,333.00	15.39	3.20	5,253.95	672.10	28.49	672.58	1.79	-1.74	-1.55
5,424.00	13.37	2.15	5,342.09	694.67	29.56	695.17	2.24	-2.22	-1.15
5,514.00	12.05	2.41	5,429.89	714.46	30.34	714.97	1.47	-1.47	0.29
5,605.00	10.64	357.75	5,519.11	732.34	30.41	732.85	1.85	-1.55	-5.12



**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 920-14M Pad  
**Well:** NBU 920-14M1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 920-14M1BS  
**TVD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**MD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,695.00	8.79	350.02	5,607.82	747.42	28.90	747.89	2.51	-2.06	-8.59
5,786.00	6.33	341.49	5,698.02	759.03	26.10	759.43	2.96	-2.70	-9.37
5,877.00	2.99	356.87	5,788.71	766.15	24.37	766.52	3.89	-3.67	16.90
5,967.00	1.14	314.25	5,878.65	769.12	23.61	769.47	2.54	-2.06	-47.36
6,058.00	0.35	123.96	5,969.65	769.60	23.19	769.93	1.63	-0.87	186.49
6,148.00	0.53	166.68	6,059.65	769.04	23.51	769.38	0.40	0.20	47.47
6,239.00	0.62	190.58	6,150.64	768.15	23.52	768.49	0.28	0.10	26.26
6,330.00	0.62	173.09	6,241.64	767.18	23.49	767.52	0.21	0.00	-19.22
6,420.00	0.53	207.90	6,331.63	766.32	23.35	766.66	0.39	-0.10	38.68
6,511.00	0.70	174.59	6,422.63	765.40	23.21	765.73	0.43	0.19	-36.60
6,601.00	0.79	184.61	6,512.62	764.23	23.21	764.57	0.18	0.10	11.13
6,692.00	0.79	181.00	6,603.61	762.98	23.15	763.31	0.05	0.00	-3.97
6,783.00	0.70	163.08	6,694.60	761.82	23.30	762.16	0.27	-0.10	-19.69
6,873.00	0.79	162.11	6,784.60	760.70	23.65	761.05	0.10	0.10	-1.08
6,964.00	0.88	150.07	6,875.59	759.50	24.19	759.86	0.22	0.10	-13.23
7,054.00	1.41	153.58	6,965.57	757.91	25.03	758.29	0.59	0.59	3.90
7,145.00	1.41	115.44	7,056.54	756.43	26.54	756.84	1.01	0.00	-41.91
7,236.00	1.23	114.82	7,147.52	755.54	28.43	756.00	0.20	-0.20	-0.68
7,326.00	0.88	102.61	7,237.50	754.98	29.98	755.48	0.46	-0.39	-13.57
7,417.00	1.06	17.97	7,328.49	755.63	30.93	756.15	1.44	0.20	-93.01
7,507.00	0.88	18.50	7,418.48	757.08	31.40	757.61	0.20	-0.20	0.59
7,598.00	1.14	337.54	7,509.47	758.58	31.28	759.10	0.82	0.29	-45.01
7,689.00	0.88	337.10	7,600.45	760.06	30.66	760.57	0.29	-0.29	-0.48
7,779.00	0.79	335.34	7,690.44	761.26	30.13	761.75	0.10	-0.10	-1.96
7,870.00	0.26	271.80	7,781.44	761.83	29.66	762.32	0.78	-0.58	-69.82
7,960.00	0.26	264.68	7,871.44	761.82	29.26	762.30	0.04	0.00	-7.91
8,051.00	0.09	285.86	7,962.44	761.82	28.98	762.29	0.20	-0.19	23.27
8,142.00	0.09	186.98	8,053.44	761.77	28.91	762.24	0.15	0.00	-108.66
8,232.00	0.35	308.18	8,143.44	761.87	28.68	762.33	0.45	0.29	134.67
8,323.00	1.32	318.47	8,234.43	762.83	27.77	763.27	1.07	1.07	11.31
8,413.00	1.06	335.78	8,324.41	764.36	26.74	764.78	0.49	-0.29	19.23
8,504.00	0.88	336.83	8,415.40	765.77	26.12	766.17	0.20	-0.20	1.15
8,594.00	0.53	8.04	8,505.39	766.82	25.90	767.22	0.56	-0.39	34.68
8,685.00	0.35	342.90	8,596.39	767.50	25.88	767.90	0.29	-0.20	-27.63
8,776.00	0.35	337.89	8,687.39	768.02	25.70	768.42	0.03	0.00	-5.51
8,866.00	0.09	251.84	8,777.38	768.26	25.52	768.64	0.39	-0.29	-95.61
8,957.00	0.26	84.76	8,868.38	768.25	25.66	768.64	0.38	0.19	-183.60
9,047.00	0.44	123.96	8,958.38	768.08	26.15	768.48	0.32	0.20	43.56
9,138.00	0.53	110.43	9,049.38	767.74	26.84	768.16	0.16	0.10	-14.87
9,229.00	0.70	123.70	9,140.37	767.28	27.69	767.72	0.24	0.19	14.58
9,319.00	0.70	142.51	9,230.37	766.54	28.49	767.00	0.25	0.00	20.90
9,410.00	1.06	160.17	9,321.36	765.31	29.11	765.78	0.49	0.40	19.41
9,500.00	1.32	163.25	9,411.34	763.53	29.69	764.02	0.30	0.29	3.42
9,591.00	0.97	156.13	9,502.32	761.82	30.30	762.33	0.41	-0.38	-7.82
9,682.00	1.06	164.39	9,593.31	760.31	30.84	760.82	0.19	0.10	9.08
9,772.00	1.23	179.33	9,683.29	758.54	31.08	759.06	0.38	0.19	16.60
9,863.00	1.14	170.19	9,774.27	756.67	31.24	757.20	0.23	-0.10	-10.04
9,953.00	1.41	161.93	9,864.25	754.74	31.74	755.27	0.36	0.30	-9.18
10,044.00	1.49	165.45	9,955.22	752.53	32.38	753.08	0.13	0.09	3.87
10,135.00	1.76	153.41	10,046.18	750.13	33.31	750.71	0.48	0.30	-13.23
10,225.00	1.67	170.81	10,136.14	747.60	34.13	748.20	0.58	-0.10	19.33
10,316.00	2.29	179.25	10,227.09	744.48	34.37	745.08	0.75	0.68	9.27
10,406.00	1.76	176.96	10,317.03	741.30	34.47	741.90	0.60	-0.59	-2.54
10,497.00	1.79	176.76	10,407.99	738.48	34.62	739.09	0.03	0.03	-0.22



**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 920-14M Pad  
**Well:** NBU 920-14M1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 920-14M1BS  
**TVD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**MD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

**Survey**

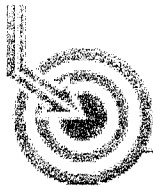
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,588.00	1.79	172.07	10,498.94	735.66	34.90	736.27	0.16	0.00	-5.15
10,678.00	1.77	171.11	10,588.90	732.89	35.31	733.52	0.04	-0.02	-1.07
10,769.00	1.14	160.97	10,679.87	730.65	35.82	731.29	0.75	-0.69	-11.14
<b>Last SDI Production MWD Survey</b>									
10,834.00	1.14	160.97	10,744.86	729.42	36.24	730.07	0.00	0.00	0.00
<b>Projection To TD</b>									

**Targets**
**Target Name**

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 920-14M1BS PBHI	0.00	0.00	10,708.00	751.16	35.54	14,540,402.78	2,020,989.37	40° 1' 53.239 N	109° 38' 25.775 W
- actual wellpath misses target center by 34.82ft at 10769.00ft MD (10679.87 TVD, 730.65 N, 35.82 E)									
- Circle (radius 25.00)									
NBU 920-14M1BS Top	0.00	0.00	5,884.55	751.16	35.54	14,540,402.78	2,020,989.37	40° 1' 53.239 N	109° 38' 25.775 W
- actual wellpath misses target center by 21.68ft at 5972.75ft MD (5884.40 TVD, 769.20 N, 23.53 E)									
- Point									

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_





**Scientific Drilling**  
Rocky Mountain Operations

## **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12  
NBU 920-14M Pad  
NBU 920-14M1BS  
OH

Design: OH

## **Survey Report - Geographic**

30 June, 2010





**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 920-14M Pad  
**Well:** NBU 920-14M1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 920-14M1BS  
**TVD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**MD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site	NBU 920-14M Pad, Sec 14 T9S R20E				
Site Position:		Northing:	14,539,718.00 ft	Latitude:	40° 1' 46.478 N
From:	Lat/Long	Easting:	2,020,941.95 ft	Longitude:	109° 38' 26.519 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.87 °

Well	NBU 920-14M1BS, 468' FSL & 637' FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,539,651.17 ft	Latitude:	40° 1' 45.814 N
	+E/-W	0.00 ft	Easting:	2,020,965.29 ft	Longitude:	109° 38' 26.232 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,812.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2005-10	2009/12/31	11.31	65.91	52,502

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	10.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	10.00	0.00	0.00	1.35	

<b>Survey Program</b>	<b>Date</b>	2010/06/30			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
143.00	2,693.00	Survey #1 - Surface MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	
2,799.00	10,834.00	Survey #2 - Production MWD (OH)	MWD SDI	MWD - Standard ver 1.0.1	



**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 920-14M Pad  
**Well:** NBU 920-14M1BS  
**Wellbore:** OH  
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**Local Co-ordinate Reference:** Well NBU 920-14M1BS  
**TVD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**MD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
10.00	0.00	0.00	10.00	0.00	0.00	14,539,651.17	2,020,965.29	40° 1' 45.814 N	109° 38' 26.232 W
143.00	0.21	15.20	143.00	0.24	0.06	14,539,651.41	2,020,965.35	40° 1' 45.816 N	109° 38' 26.231 W
<b>First SDI Surface MWD Survey</b>									
233.00	1.27	358.87	232.99	1.39	0.09	14,539,652.56	2,020,965.36	40° 1' 45.828 N	109° 38' 26.231 W
323.00	2.10	356.44	322.95	4.03	-0.03	14,539,655.21	2,020,965.20	40° 1' 45.854 N	109° 38' 26.232 W
413.00	3.04	356.98	412.86	8.06	-0.26	14,539,659.23	2,020,964.91	40° 1' 45.894 N	109° 38' 26.235 W
503.00	2.56	357.71	502.75	12.46	-0.47	14,539,663.62	2,020,964.63	40° 1' 45.937 N	109° 38' 26.238 W
593.00	2.84	1.45	592.65	16.69	-0.49	14,539,667.85	2,020,964.55	40° 1' 45.979 N	109° 38' 26.238 W
683.00	3.33	5.48	682.52	21.52	-0.19	14,539,672.69	2,020,964.78	40° 1' 46.027 N	109° 38' 26.234 W
773.00	3.01	1.64	772.38	26.49	0.13	14,539,677.66	2,020,965.02	40° 1' 46.076 N	109° 38' 26.230 W
863.00	2.46	330.50	862.29	30.53	-0.75	14,539,681.69	2,020,964.07	40° 1' 46.116 N	109° 38' 26.242 W
953.00	2.32	9.48	952.21	34.01	-1.40	14,539,685.15	2,020,963.37	40° 1' 46.150 N	109° 38' 26.250 W
1,043.00	3.22	30.75	1,042.11	37.98	0.19	14,539,689.15	2,020,964.90	40° 1' 46.189 N	109° 38' 26.230 W
1,133.00	3.63	33.31	1,131.95	42.53	3.05	14,539,693.74	2,020,967.69	40° 1' 46.234 N	109° 38' 26.193 W
1,223.00	3.30	21.43	1,221.79	47.32	5.56	14,539,698.57	2,020,970.13	40° 1' 46.282 N	109° 38' 26.161 W
1,313.00	2.98	12.92	1,311.65	52.02	7.03	14,539,703.29	2,020,971.52	40° 1' 46.328 N	109° 38' 26.142 W
1,403.00	2.55	5.34	1,401.55	56.29	7.74	14,539,707.57	2,020,972.17	40° 1' 46.370 N	109° 38' 26.133 W
1,493.00	2.18	355.33	1,491.47	59.99	7.78	14,539,711.27	2,020,972.16	40° 1' 46.407 N	109° 38' 26.132 W
1,583.00	2.33	345.90	1,581.40	63.47	7.20	14,539,714.74	2,020,971.52	40° 1' 46.441 N	109° 38' 26.139 W
1,673.00	1.68	343.23	1,671.34	66.51	6.37	14,539,717.77	2,020,970.65	40° 1' 46.471 N	109° 38' 26.150 W
1,763.00	1.69	328.22	1,761.31	68.90	5.29	14,539,720.14	2,020,969.53	40° 1' 46.495 N	109° 38' 26.164 W
1,853.00	1.79	318.38	1,851.26	71.08	3.66	14,539,722.30	2,020,967.87	40° 1' 46.517 N	109° 38' 26.185 W
1,943.00	1.79	336.23	1,941.22	73.41	2.16	14,539,724.61	2,020,966.33	40° 1' 46.540 N	109° 38' 26.204 W
2,033.00	2.07	357.41	2,031.17	76.32	1.52	14,539,727.51	2,020,965.65	40° 1' 46.568 N	109° 38' 26.212 W
2,123.00	2.06	6.31	2,121.11	79.56	1.62	14,539,730.74	2,020,965.70	40° 1' 46.600 N	109° 38' 26.211 W
2,213.00	1.75	12.47	2,211.06	82.51	2.10	14,539,733.70	2,020,966.13	40° 1' 46.630 N	109° 38' 26.205 W
2,303.00	1.60	1.35	2,301.03	85.10	2.42	14,539,736.30	2,020,966.42	40° 1' 46.655 N	109° 38' 26.201 W
2,393.00	1.19	12.00	2,391.00	87.27	2.65	14,539,738.47	2,020,966.61	40° 1' 46.677 N	109° 38' 26.198 W
2,483.00	1.19	359.85	2,480.98	89.12	2.84	14,539,740.33	2,020,966.77	40° 1' 46.695 N	109° 38' 26.195 W
2,573.00	1.42	351.81	2,570.96	91.16	2.68	14,539,742.36	2,020,966.58	40° 1' 46.715 N	109° 38' 26.198 W
2,663.00	1.11	348.14	2,660.93	93.12	2.34	14,539,744.31	2,020,966.21	40° 1' 46.734 N	109° 38' 26.202 W
2,693.00	0.71	334.81	2,690.93	93.57	2.20	14,539,744.76	2,020,966.07	40° 1' 46.739 N	109° 38' 26.204 W
<b>Last SDI Surface MWD Survey</b>									
2,799.00	0.53	305.02	2,796.92	94.45	1.52	14,539,745.63	2,020,965.37	40° 1' 46.748 N	109° 38' 26.212 W
<b>First SDI Production MWD Survey</b>									
2,889.00	2.20	36.07	2,886.90	96.08	2.20	14,539,747.27	2,020,966.02	40° 1' 46.764 N	109° 38' 26.204 W
2,980.00	2.11	3.47	2,977.84	99.17	3.33	14,539,750.38	2,020,967.11	40° 1' 46.794 N	109° 38' 26.189 W
3,071.00	4.13	12.25	3,068.70	104.04	4.12	14,539,755.26	2,020,967.83	40° 1' 46.842 N	109° 38' 26.179 W
3,161.00	6.16	12.08	3,158.33	111.93	5.82	14,539,763.18	2,020,969.41	40° 1' 46.920 N	109° 38' 26.157 W
3,252.00	8.09	11.46	3,248.63	122.98	8.12	14,539,774.26	2,020,971.53	40° 1' 47.030 N	109° 38' 26.128 W
3,342.00	10.38	12.08	3,337.45	137.12	11.07	14,539,788.44	2,020,974.27	40° 1' 47.169 N	109° 38' 26.090 W
3,433.00	13.28	8.48	3,426.51	155.48	14.33	14,539,806.85	2,020,977.25	40° 1' 47.351 N	109° 38' 26.048 W
3,524.00	14.25	2.59	3,514.90	177.00	16.38	14,539,828.40	2,020,978.97	40° 1' 47.564 N	109° 38' 26.021 W
3,611.00	16.71	4.08	3,598.74	200.18	17.75	14,539,851.60	2,020,979.99	40° 1' 47.793 N	109° 38' 26.004 W
3,702.00	16.18	4.96	3,686.02	225.86	19.78	14,539,877.31	2,020,981.62	40° 1' 48.047 N	109° 38' 25.978 W
3,792.00	15.83	0.83	3,772.53	250.63	21.04	14,539,902.09	2,020,982.50	40° 1' 48.291 N	109° 38' 25.961 W
3,883.00	17.76	355.73	3,859.65	276.88	20.19	14,539,928.33	2,020,981.25	40° 1' 48.551 N	109° 38' 25.972 W
3,974.00	18.20	356.79	3,946.21	304.91	18.36	14,539,956.33	2,020,978.99	40° 1' 48.828 N	109° 38' 25.996 W
4,064.00	18.11	357.40	4,031.73	332.92	16.94	14,539,984.31	2,020,977.14	40° 1' 49.105 N	109° 38' 26.014 W
4,155.00	15.56	353.62	4,118.82	359.18	14.94	14,540,010.54	2,020,974.75	40° 1' 49.364 N	109° 38' 26.040 W
4,245.00	13.37	357.66	4,205.97	381.58	13.17	14,540,032.91	2,020,972.64	40° 1' 49.586 N	109° 38' 26.063 W
4,336.00	14.95	4.26	4,294.20	403.80	13.61	14,540,055.13	2,020,972.74	40° 1' 49.805 N	109° 38' 26.057 W
4,427.00	12.66	0.92	4,382.57	425.48	14.64	14,540,076.82	2,020,973.44	40° 1' 50.020 N	109° 38' 26.044 W
4,517.00	13.45	357.40	4,470.25	445.80	14.33	14,540,097.13	2,020,972.82	40° 1' 50.221 N	109° 38' 26.048 W
4,608.00	15.92	3.20	4,558.27	468.83	14.55	14,540,120.17	2,020,972.68	40° 1' 50.448 N	109° 38' 26.045 W



**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 920-14M Pad  
**Well:** NBU 920-14M1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 920-14M1BS  
**TVD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**MD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,699.00	14.95	0.48	4,645.99	493.03	15.34	14,540,144.38	2,020,973.11	40° 1' 50.688 N	109° 38' 26.035 W
4,789.00	16.09	4.34	4,732.71	517.08	16.38	14,540,168.44	2,020,973.78	40° 1' 50.925 N	109° 38' 26.021 W
4,880.00	18.11	3.64	4,819.68	543.77	18.23	14,540,195.16	2,020,975.23	40° 1' 51.189 N	109° 38' 25.998 W
4,970.00	16.88	3.20	4,905.52	570.78	19.85	14,540,222.19	2,020,976.43	40° 1' 51.456 N	109° 38' 25.977 W
5,061.00	16.97	3.47	4,992.57	597.23	21.39	14,540,248.65	2,020,977.57	40° 1' 51.717 N	109° 38' 25.957 W
5,152.00	15.04	8.56	5,080.05	622.16	23.95	14,540,273.62	2,020,979.75	40° 1' 51.964 N	109° 38' 25.924 W
5,242.00	16.97	4.61	5,166.56	646.80	26.75	14,540,298.31	2,020,982.17	40° 1' 52.207 N	109° 38' 25.888 W
5,333.00	15.39	3.20	5,253.95	672.10	28.49	14,540,323.62	2,020,983.52	40° 1' 52.458 N	109° 38' 25.866 W
5,424.00	13.37	2.15	5,342.09	694.67	29.56	14,540,346.21	2,020,984.25	40° 1' 52.681 N	109° 38' 25.852 W
5,514.00	12.05	2.41	5,429.89	714.46	30.34	14,540,366.01	2,020,984.73	40° 1' 52.876 N	109° 38' 25.842 W
5,605.00	10.64	357.75	5,519.11	732.34	30.41	14,540,383.89	2,020,984.53	40° 1' 53.053 N	109° 38' 25.841 W
5,695.00	8.79	350.02	5,607.82	747.42	28.90	14,540,398.94	2,020,982.78	40° 1' 53.202 N	109° 38' 25.860 W
5,786.00	6.33	341.49	5,698.02	759.03	26.10	14,540,410.51	2,020,979.80	40° 1' 53.317 N	109° 38' 25.896 W
5,877.00	2.99	356.87	5,788.71	766.15	24.37	14,540,417.61	2,020,977.97	40° 1' 53.387 N	109° 38' 25.919 W
5,967.00	1.14	314.25	5,878.65	769.12	23.61	14,540,420.56	2,020,977.16	40° 1' 53.417 N	109° 38' 25.928 W
6,058.00	0.35	123.96	5,969.65	769.60	23.19	14,540,421.03	2,020,976.73	40° 1' 53.421 N	109° 38' 25.934 W
6,148.00	0.53	166.68	6,059.65	769.04	23.51	14,540,420.48	2,020,977.06	40° 1' 53.416 N	109° 38' 25.930 W
6,239.00	0.62	190.58	6,150.64	768.15	23.52	14,540,419.59	2,020,977.08	40° 1' 53.407 N	109° 38' 25.930 W
6,330.00	0.62	173.09	6,241.64	767.18	23.49	14,540,418.61	2,020,977.07	40° 1' 53.397 N	109° 38' 25.930 W
6,420.00	0.53	207.90	6,331.63	766.32	23.35	14,540,417.76	2,020,976.94	40° 1' 53.389 N	109° 38' 25.932 W
6,511.00	0.70	174.59	6,422.63	765.40	23.21	14,540,416.83	2,020,976.81	40° 1' 53.380 N	109° 38' 25.934 W
6,601.00	0.79	184.61	6,512.62	764.23	23.21	14,540,415.67	2,020,976.83	40° 1' 53.368 N	109° 38' 25.934 W
6,692.00	0.79	181.00	6,603.61	762.98	23.15	14,540,414.41	2,020,976.79	40° 1' 53.356 N	109° 38' 25.934 W
6,783.00	0.70	163.08	6,694.60	761.82	23.30	14,540,413.26	2,020,976.96	40° 1' 53.344 N	109° 38' 25.932 W
6,873.00	0.79	162.11	6,784.60	760.70	23.65	14,540,412.15	2,020,977.33	40° 1' 53.333 N	109° 38' 25.928 W
6,964.00	0.88	150.07	6,875.59	759.50	24.19	14,540,410.95	2,020,977.89	40° 1' 53.321 N	109° 38' 25.921 W
7,054.00	1.41	153.58	6,965.57	757.91	25.03	14,540,409.38	2,020,978.75	40° 1' 53.306 N	109° 38' 25.910 W
7,145.00	1.41	115.44	7,056.54	756.43	26.54	14,540,407.91	2,020,980.28	40° 1' 53.291 N	109° 38' 25.891 W
7,236.00	1.23	114.82	7,147.52	755.54	28.43	14,540,407.05	2,020,982.19	40° 1' 53.282 N	109° 38' 25.866 W
7,326.00	0.88	102.61	7,237.50	754.98	29.98	14,540,406.52	2,020,983.75	40° 1' 53.277 N	109° 38' 25.846 W
7,417.00	1.06	17.97	7,328.49	755.63	30.93	14,540,407.18	2,020,984.68	40° 1' 53.283 N	109° 38' 25.834 W
7,507.00	0.88	18.50	7,418.48	757.08	31.40	14,540,408.64	2,020,985.14	40° 1' 53.298 N	109° 38' 25.828 W
7,598.00	1.14	337.54	7,509.47	758.58	31.28	14,540,410.13	2,020,984.99	40° 1' 53.312 N	109° 38' 25.830 W
7,689.00	0.88	337.10	7,600.45	760.06	30.66	14,540,411.60	2,020,984.35	40° 1' 53.327 N	109° 38' 25.838 W
7,779.00	0.79	335.34	7,690.44	761.26	30.13	14,540,412.80	2,020,983.80	40° 1' 53.339 N	109° 38' 25.845 W
7,870.00	0.26	271.80	7,781.44	761.83	29.66	14,540,413.37	2,020,983.33	40° 1' 53.345 N	109° 38' 25.851 W
7,960.00	0.26	264.68	7,871.44	761.82	29.26	14,540,413.35	2,020,982.92	40° 1' 53.344 N	109° 38' 25.856 W
8,051.00	0.09	285.86	7,962.44	761.82	28.98	14,540,413.34	2,020,982.65	40° 1' 53.344 N	109° 38' 25.859 W
8,142.00	0.09	186.98	8,053.44	761.77	28.91	14,540,413.29	2,020,982.57	40° 1' 53.344 N	109° 38' 25.860 W
8,232.00	0.35	308.18	8,143.44	761.87	28.68	14,540,413.39	2,020,982.34	40° 1' 53.345 N	109° 38' 25.863 W
8,323.00	1.32	318.47	8,234.43	762.83	27.77	14,540,414.33	2,020,981.41	40° 1' 53.354 N	109° 38' 25.875 W
8,413.00	1.06	335.78	8,324.41	764.36	26.74	14,540,415.85	2,020,980.36	40° 1' 53.370 N	109° 38' 25.888 W
8,504.00	0.88	336.83	8,415.40	765.77	26.12	14,540,417.25	2,020,979.72	40° 1' 53.383 N	109° 38' 25.896 W
8,594.00	0.53	8.04	8,505.39	766.82	25.90	14,540,418.29	2,020,979.49	40° 1' 53.394 N	109° 38' 25.899 W
8,685.00	0.35	342.90	8,596.39	767.50	25.88	14,540,418.98	2,020,979.46	40° 1' 53.401 N	109° 38' 25.899 W
8,776.00	0.35	337.89	8,687.39	768.02	25.70	14,540,419.50	2,020,979.26	40° 1' 53.406 N	109° 38' 25.902 W
8,866.00	0.09	251.84	8,777.38	768.26	25.52	14,540,419.73	2,020,979.09	40° 1' 53.408 N	109° 38' 25.904 W
8,957.00	0.26	84.76	8,868.38	768.25	25.66	14,540,419.73	2,020,979.23	40° 1' 53.408 N	109° 38' 25.902 W
9,047.00	0.44	123.96	8,958.38	768.08	26.15	14,540,419.56	2,020,979.72	40° 1' 53.406 N	109° 38' 25.896 W
9,138.00	0.53	110.43	9,049.38	767.74	26.84	14,540,419.23	2,020,980.41	40° 1' 53.403 N	109° 38' 25.887 W
9,229.00	0.70	123.70	9,140.37	767.28	27.69	14,540,418.78	2,020,981.27	40° 1' 53.398 N	109° 38' 25.876 W
9,319.00	0.70	142.51	9,230.37	766.54	28.49	14,540,418.06	2,020,982.08	40° 1' 53.391 N	109° 38' 25.866 W
9,410.00	1.06	160.17	9,321.36	765.31	29.11	14,540,416.83	2,020,982.72	40° 1' 53.379 N	109° 38' 25.858 W
9,500.00	1.32	163.25	9,411.34	763.53	29.69	14,540,415.07	2,020,983.33	40° 1' 53.361 N	109° 38' 25.850 W
9,591.00	0.97	156.13	9,502.32	761.82	30.30	14,540,413.37	2,020,983.97	40° 1' 53.344 N	109° 38' 25.842 W



**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 920-14M Pad  
**Well:** NBU 920-14M1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 920-14M1BS  
**TVD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**MD Reference:** GL 4812' & RKB 14' @ 4826.00ft (Ensign 145)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.16 Multi-User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
9,682.00	1.06	164.39	9,593.31	760.31	30.84	14,540,411.86	2,020,984.53	40° 1' 53.329 N	109° 38' 25.835 W
9,772.00	1.23	179.33	9,683.29	758.54	31.08	14,540,410.10	2,020,984.79	40° 1' 53.312 N	109° 38' 25.832 W
9,863.00	1.14	170.19	9,774.27	756.67	31.24	14,540,408.23	2,020,984.98	40° 1' 53.294 N	109° 38' 25.830 W
9,953.00	1.41	161.93	9,864.25	754.74	31.74	14,540,406.30	2,020,985.51	40° 1' 53.274 N	109° 38' 25.824 W
10,044.00	1.49	165.45	9,955.22	752.53	32.38	14,540,404.10	2,020,986.19	40° 1' 53.253 N	109° 38' 25.816 W
10,135.00	1.76	153.41	10,046.18	750.13	33.31	14,540,401.72	2,020,987.15	40° 1' 53.229 N	109° 38' 25.804 W
10,225.00	1.67	170.81	10,136.14	747.60	34.13	14,540,399.21	2,020,988.01	40° 1' 53.204 N	109° 38' 25.793 W
10,316.00	2.29	179.25	10,227.09	744.48	34.37	14,540,396.08	2,020,988.30	40° 1' 53.173 N	109° 38' 25.790 W
10,406.00	1.76	176.96	10,317.03	741.30	34.47	14,540,392.91	2,020,988.44	40° 1' 53.142 N	109° 38' 25.789 W
10,497.00	1.79	176.76	10,407.99	738.48	34.62	14,540,390.10	2,020,988.64	40° 1' 53.114 N	109° 38' 25.787 W
10,588.00	1.79	172.07	10,498.94	735.66	34.90	14,540,387.27	2,020,988.96	40° 1' 53.086 N	109° 38' 25.783 W
10,678.00	1.77	171.11	10,588.90	732.89	35.31	14,540,384.51	2,020,989.41	40° 1' 53.058 N	109° 38' 25.778 W
10,769.00	1.14	160.97	10,679.87	730.65	35.82	14,540,382.28	2,020,989.96	40° 1' 53.036 N	109° 38' 25.771 W
<b>Last SDI Production MWD Survey</b>									
10,834.00	1.14	160.97	10,744.86	729.42	36.24	14,540,381.06	2,020,990.40	40° 1' 53.024 N	109° 38' 25.766 W
<b>Projection To TD</b>									

**Targets**
**Target Name**

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
NBU 920-14M1BS PBHI									
- actual wellpath misses target center by 34.82ft at 10769.00ft MD (10679.87 TVD, 730.65 N, 35.82 E)	0.00	0.00	10,708.00	751.16	35.54	14,540,402.78	2,020,989.37	40° 1' 53.239 N	109° 38' 25.775 W
- Circle (radius 25.00)									
NBU 920-14M1BS Top									
- actual wellpath misses target center by 21.68ft at 5972.75ft MD (5884.40 TVD, 769.20 N, 23.53 E)	0.00	0.00	5,884.55	751.16	35.54	14,540,402.78	2,020,989.37	40° 1' 53.239 N	109° 38' 25.775 W
- Point									

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
143.00	143.00	0.24	0.06	First SDI Surface MWD Survey
2,693.00	2,690.93	93.57	2.20	Last SDI Surface MWD Survey
2,799.00	2,796.92	94.45	1.52	First SDI Production MWD Survey
10,769.00	10,679.87	730.65	35.82	Last SDI Production MWD Survey
10,834.00	10,744.86	729.42	36.24	Projection To TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0577A
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 920-14M1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0468 FSL 0637 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 14 Township: 09.0S Range: 20.0E Meridian: S		<b>9. API NUMBER:</b> 43047505250000
<b>PHONE NUMBER:</b> 720 929-6515 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 3/9/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input checked="" type="checkbox"/> <b>CASING REPAIR</b> <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px; vertical-align: middle;"></span>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  

The operator requests approval to conduct wellhead/casing repair operations on the subject well location. Please find the attached procedures for the proposed repair work on the subject well location.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**

Date: 03/10/2011

By: 

<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A		<b>DATE</b> 3/9/2011



**WORKORDER #: 88119338**

**Name:** NBU 920-14M1BS- 920-14M PAD  
**Surface Location:** SWSW SEC.14 T9S, R20E  
Uintah County, UT

3/8/11

**API:** 4304750525      **LEASE#:** UTU-0577A

**ELEVATIONS:** 4812' GL      4825' KB

**TOTAL DEPTH:** 10,834'      **PBTD:** 10,827'

**SURFACE CASING:** 9 5/8", 36# J-55 @ 2711'

**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 @ 10,828'  
TOC @ ~700' per CBL

**PERFORATIONS:** Mesaverde 8722' – 10,654'

Tubular/Borehole	Drift inches	Collapse psi	Burst psi	Capacities		
				Gal./ft.	Cuft/ft.	Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624	0.02173	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528	0.0872	0.01554
9.625" 36# J-55	8.921	2020	3520	3.247	0.434	0.0773
<b>Annular Capacities</b>						
2.375" tbg. X 4 1/2" 11.6# csg				0.4227	0.0565	0.01006

**GEOLOGICAL TOPS:**

1694' Green River  
1866' Bird's Nest  
2489' Mahogany  
5241' Wasatch  
8558' Mesaverde



## **NBU 920-14M1BS – WELLHEAD REPLACEMENT PROCEDURE**

### **PREP-WORK PRIOR TO MIRU:**

1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
3. Open casing valve and record pressures.
4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
5. Open the relief valve and blow well down to the atmosphere.
6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

### **WORKOVER PROCEDURE:**

1. MIRU workover rig.
2. Kill well with 10# brine / KCL (dictated by well pressure ).
3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
4. Pooh w/ tubing.
5. Rig up wireline service. RIH and set CBP @ ~8672'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service.
6. Remove BOP and ND WH.
7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.



### **CUT/PATCH PROCEDURE:**

1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
2. POOH, LD cutters and casing.
3. PU 1 joint of 3 ½" IF drill pipe with 4 ½" right hand standard grapple overshot. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to +/- 7000 ft-lbs, count number of turns to make-up, and document in the daily report. Release overshot, POOH, and lay down.
4. PU & RIH w/ 4 ½" 10k external casing patch on 4 ½" I-80 or P-110 casing.
5. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
6. Install C-22 slips. Land casing w/ 80,000# tension.
7. Cut-off and dress 4 ½" casing stub.
8. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~8622'. Clean out to PBTD (10,827').
9. POOH, land tbg and pump off POBS.
10. NUWH, RDMO. Turn well over to production ops.

### **BACK-OFF PROCEDURE:**

1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
2. POOH, LD cutters and casing.
3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.
4. MIRU wireline services. RIH and shoot string shot at casing collar @ 46'.
5. MIRU casing crew.
6. Back-off casing, POOH.
7. PU new casing joint w/ entry guide and RIH. Tag casing top. Thread into casing and torque up to +/- 7000 ft-lbs, count number of additional turns to make-up, and document in the daily report.
8. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
9. Install C-22 slips. Land casing w/ 80,000# tension.



10. Cut-off and dress 4 ½" casing stub.
11. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~8622'. Clean out to PBTD (10,827').
12. POOH, land tbg and pump off POBS.
13. NUWH, RDMO. Turn well over to production ops.





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## **Logan High Pressure Casing Patches Assembly Procedure**

All parts should be thoroughly greased before being assembled.

1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type "L" Packers.
3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.
4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.
5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.
6. Install the Cutlipped Guide into the lower end of the Bowl.
7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.
8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.



PACKER PROTECTOR  
FULLY SEATED IN TOP SUB

4.08

4.275

4.75

PACKER PROTECTOR  
IN RUNNING POSITION

4.48

36.24

31.75

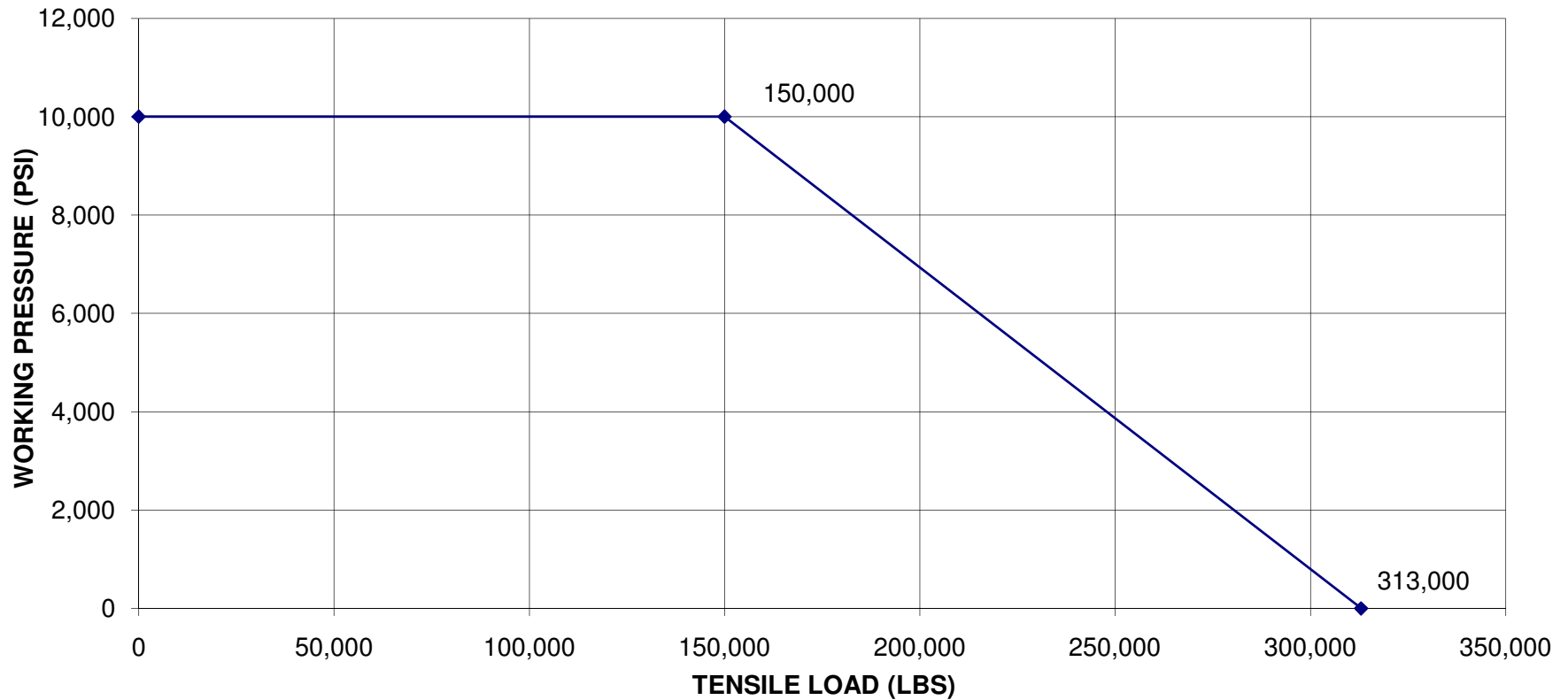
21.43

52.70

**PACKER PROTECTOR—  
FULLY SEATED IN TOP SUB**



**STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH  
4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L  
LOGAN ASSEMBLY NO. 510L-005 -000**



COLLAPSE PRESSURE:  
11,222 PSI @ 0 TENSILE  
8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield:  
Tensile Strength w/ 0 Int. Press.= 472,791lbs.  
Tensile Strength w/ 10K Int. Press.= 313,748lbs.

DATA BY SLS 11/16/2009